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Express Mail Label No. ER821437969US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Clark H. Gates, II
Serial No.: 10/008,738
Filed: 11/09/2001
For: Electrical Box with Recessed Faceplate
Confirmation No.: 6062
Group Art Unit: 3727
Examiner: Joseph C. Merek
Attorney Docket No.: PGATEC-EB

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF (PATENT APPLICATION-37 CFR 192)

1. Transmitted herewith in triplicate is the APPEAL BRIEF in this application with respect to the Notice of Appeal filed on February 26, 2004.

2. STATUS OF APPLICANT

This application is on behalf of a small entity.

The verified statement of small entity status has already been filed.

3. FEE FOR FILING APPEAL BRIEF

Pursuant to 37 CFR 1.17(c) the fee for filing the Appeal Brief is \$165.00.

Appeal Brief fee due \$165.00.

08/26/2004 JDALINAN 00000131 10008738

02 TC:2254

740.00 OP

4. EXTENSION OF TERM

The proceedings herein are for a patent application, and the provisions of 37 CFR 1.136 apply.

Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)(1)-(5)) for a total of four months. The requisite fee for a small entity is \$740.00.

Fee \$740.00

5. TOTAL FEE DUE

The total fee due is

Appeal brief fee \$165.00

Extension fee \$740.00

TOTAL FEE DUE \$905.00

6. Attached is a check in the sum of \$905.00.

DATED this 25th day of August, 2004.

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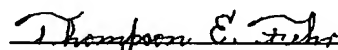
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Date of Deposit: August 25, 2004

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Thompson E. Fehr

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APPELLANT'S BRIEF (37 CFR 1.192)

This brief is in furtherance of the Notice of Appeal filed in this case on February 26, 2004.

The fees required under § 1.17(a) and any required petition for extension of time for filing this brief and fees therefor are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief is transmitted in triplicate (37 CFR 1.192(a)).

08/26/2004 JDA LINAN 00000131 10008738

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This brief contains the following items, under headings of the same name and in the order given:

REAL PARTY IN INTEREST
RELATED APPEALS AND INTERFERENCES
STATUS OF CLAIMS
STATUS OF AMENDMENTS
SUMMARY OF INVENTION
ISSUES
GROUPING OF CLAIMS
ARGUMENT
 Rejections under 35 U.S.C. 103
APPENDIX OF CLAIMS INVOLVED IN THE APPEAL

The final page of this brief bears the attorney's signature.

REAL PARTY IN INTEREST

The real party in interest is Clark H. Gates, II.

RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to Appellants or Appellants' legal representative which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

STATUS OF CLAIMS

Claims 1 through 28 were in the original Application; subject to a requirement for restriction, claims 1 through 12, 16, 18, 22, 24 through 28 were withdrawn, leaving claims 13 through 15, 17, 19 through 21, and 23 pending.

The claims being appealed are claims 13 through 15, 17, 19 through 21, and 23.

STATUS OF AMENDMENTS

No amendment has been filed subsequent to the final rejection.

SUMMARY OF INVENTION

A basic summary of the invention is given on page 6 of the present application:

The present invention includes . . . a new electrical box with a recessed faceplate

. . . [The new electrical box has] a one-piece faceplate; but the new electrical box is also designed to accommodate a two-part faceplate which permits adjusting the distance between the outward surface of the electrical instrumentality installed within the electrical box and the flange at the front of the faceplate so that, after installation of the box, it can be assured that the flange of the faceplate will be flush against the wall in which the electrical box has been installed and that a wall of the faceplate will be flush against the outward surface of the installed electrical equipment, thereby meeting, in a relatively easy fashion, the . . . National Electrical Code.

Furthermore, no screws or other components of a releasable fastener not employing screws are exposed in any of the versions of the electrical box; and once the electrical instrumentality is installed within the box, there are no openings in the electrical box.

The preceding is basically accomplished by enlarging both the height and width of the mouth of the electrical box as well as adding threaded channels to the sides of the electrical box.

Greater understanding of the invention can be obtained from page 8, line 1 through page 10, line 27 and page 11, line 13 through page 11, line 27:

The Electrical Box with Recessed Faceplate having a one-piece recessed faceplate but designed to accommodate a two-piece recessed faceplate has, as illustrated in Figure 1, a box 1 into which a one-piece recessed faceplate 2 is removably inserted.

The box 1 has an open front or mouth 3 and a closed back 4, although the rear wall 4 contains the knock-out tabs that are well known in the art for creating openings through which wiring can pass.

Attached to and projecting generally forward from the rear wall 4 is a lateral surface 1500 that connects the perimeter 1501 of the rear wall 4 to a first end 1502 of a connecting wall 1503 which connecting wall 1503 extends generally outward from, and preferably, perpendicular to, the lateral surface 1500. Attached to and projecting generally forward from the second end 1504 and from the sides 1505 of the connecting wall 1503 is the first end 1506 of the front portion 11. The second end 1507 of the front portion 11 forms the mouth 3 of the box 1.

The top 5, bottom 6, and sides 7 of the rear portion 8 of the box 1 each contain a channel 9 extending into the box 1 to accommodate a releasable fastener, preferably a screw, 10, with each channel 9 extending toward the back 4 of the box 1 and preferably being generally centrally located across the top 5, bottom 6, and each side 7 of the box 1.

In the preferred embodiment, the box 1 has a rectangular cross section. As illustrated in Figure 1 and Figure 2, the front portion 11 of the box 1 extends beyond the top 5 and beyond the bottom 6 of the rear portion 8. A top wall 12 that is preferably generally parallel to the front 3 and the back 4 of the box 1 runs from the top 5 of the rear portion 8 to the top 13 of the front portion 11 of the box 1 and between the sides 7 of the box 1. Similarly, a bottom wall 16 that is preferably generally parallel to the front 3 and the back 4 of the box 1 runs from the bottom 6 of the rear portion 8 to the bottom 17 of the front portion 11 of the

box 1 and between the sides 7 of the box 1. Thus, in the preferred embodiment, the connecting wall 1503 is comprised of the top wall 12 and the bottom wall 16 and sides 7 which are integrally formed with the sides 7 of the rear portion 8 and the sides 7 of the front portion 11 of the box 1.

As suggested above, the interior ends 1001 of the channels 9 lie within the front portion 11 of the box 1; such ends 1001 are preferably covered except for a threaded aperture 1002 in such ends 1001 and are preferably all substantially aligned with one another.

The channels 9 and, in the preferred embodiment, the threaded apertures 1002 of the upper and lower channels 9 are used either to attach an electrical instrumentality 15 or a faceplate to the box 1. Whether the attachment is for an electrical instrumentality 15 or a faceplate is determined by whether the electrical instrumentality 15 is intended to be attached to the faceplate or directly to the box 1. This is the same situation as for traditional electrical boxes. If the electrical instrumentality 15 is intended to be attached directly to the box 1, the threaded apertures 1002 of the upper and lower channels 9 each accommodate a screw 10 for holding the electrical instrumentality 15 to the box 1, as illustrated in Figure 1 through Figure 4. Otherwise, the threaded apertures 1002 of the upper and lower channels 9 would be available to retain a screw 10 for holding the faceplate to the box 1.

Furthermore, as is the case with traditional faceplates, attachment of an electrical instrumentality 15 to a faceplate can be permanent or releasable, at least when the faceplate is intended to be attached directly to the box 1.

Retention of faceplates, whether one-piece or two-piece, to electrical boxes 1 is, as indicated above, preferably done with screws 10, as illustrated in Figure 1 through Figure 4, since screws tend to pull the faceplate against the mounting surface. However, the only essential feature is that a releasable fastener be used to hold the faceplate either directly to the box 1 or indirectly to the box 1 by having the faceplate directly attached, with a releasable fastener, to an electrical instrumentality 15 that is, itself, directly connected to the box 1 with a releasable fastener. Thus, for example, any type of snap-fit for a faceplate to the box 1 or to the electrical instrumentality 15 that is well known in the art may be employed.

For the embodiments depicted in Figure 1 through Figure 4, the top wall 12 contains an aperture 19 to accommodate a screw 10 that extends through the top wall 12 outside the box 1. Similarly, the bottom wall 16 contains an aperture 20 to accommodate a screw 10 that extends through the bottom wall 16 outside the box 1 for the same purpose as the aperture 19. Apertures 19, 20 accommodate screws 10 which are used to attach faceplates to the type of electrical instrumentality 15 depicted in Figure 1 through Figure 4, using threaded aperture

101 of the electrical instrumentality **15**. For different electrical instrumentalities, however, the number and location of apertures for attaching a faceplate to an electrical instrumentality **15** depend upon particular electrical instrumentality **15** that is utilized.

The channels **9** on the sides **7** of the box **1** and their associated threaded apertures **1002** accommodate screws **10** to draw toward the box **1** and retain the outer portion **24** of a two-piece recessed faceplate **25**, as shown in Figure 3.

The one-piece recessed faceplate **2** has a rear wall **26** containing one or more instrumentality apertures **27** to accommodate the electrical instrumentality **15**. Attached to and projecting generally forward from the rear wall **26** is an interior surface **1400** that connects the perimeter **1401** of the rear wall **26** to a flange **33**. The rear wall **26** has substantially the same shape as does the cross section of the front portion **11** of the box **1**. In the case of a box **1** having a traditionally rectangular cross section, as depicted in Figure 1 and Figure 2, the interior surface **1400** comprises a top **27**, bottom **28**, and two sides **29** attached to one another so as to form a four-sided object. To the front **30** of the top **27**, the front **31** of the bottom **28**, and the front **32** of the two sides **29** is attached a flange **33**, the back side **34** of which flange **33** is designed to seat against the mounting surface. The faceplate **2** has, in comparison to the box **1**, dimensions such that the flange **33** extends from the interior surface **1400** of the box **1** to a position laterally beyond the front of the mouth **3**.

The rear wall **26** is also adapted to accommodate a releasable fastener for fastening the faceplate **2** directly or indirectly, through the electrical instrumentality **15**, to the box **1**. Preferably, this consists of one or more apertures **1003** to accommodate screws **10**.

Thus, the Electrical Box with Recessed Faceplate having a one-piece recessed faceplate has a box **1** adapted to accommodate a two-piece recessed faceplate **25**, has no screws **10** or analogous components of another type of releasable fastener exposed within the box **1** behind the installed electrical equipment **15**, and possesses no substantial gaps or apertures other than those designed to accommodate the installed electrical equipment **15** and screws **10** or components of another type of releasable fastener. The description to this point has concentrated upon the embodiments depicted in Figure 1 through Figure 4. Any embodiment utilizing the inventive features described in the first sentence of this paragraph would, however, fall within the scope of this invention, *e.g.*, the cross section of the box **1** need not necessarily be rectangular.

...

The outer portion **24** of the two-piece recessed faceplate **25** is constructed just as is the one-piece recessed faceplate **2** except that such outer portion **24** does not have a rear wall **26** but instead has attached to each side **29** a longitudinal

projection **201** extending inward having an aperture **44** to accommodate a screw **10** or other releasable fastener that will draw toward the box **1**, and retain, the outer portion **24** of the two-piece recessed faceplate **25**. This pulls the back side **34** of the flange **33** against the mounting surface.

The inner portion **45** of the two-piece recessed faceplate **25** is constructed the same as the one-piece recessed faceplate **2** except that it does not have the flange **33** but does possess the number of apertures **46**, two apertures **46** in the case of screws **10**, to accommodate the releasable fasteners that draw the outer portion **24** of the two-piece recessed faceplate **25** to the box **1**.

The top **27**, bottom **28**, and two sides **29** for the outer portion **24** of the two-piece recessed faceplate **25** are sized so that they will slide along the inside of the top **27**, bottom **28**, and two sides **29**, respectively, of the inner portion **45** in order that there will substantially be no gaps between these corresponding features.

ISSUES

There are two issues in this appeal.

The first issue is whether or not claims 13 through 15, 17, 19 through 21, and 23 contain subject matter which was described in the specification in such a way as to enable one skilled in the art to which it pertains; or with which it is most nearly connected, to make and/or use the invention (35 U.S.C. § 112, first paragraph).

The second issue is whether or not claims 13 through 15, 17, 19 through 21, and 23 particularly point out and distinctly claim the subject matter which applicant regards as his invention (35 U.S.C. § 112, second paragraph).

GROUPING OF CLAIMS

Appellant does not contend that, for each ground of rejection being contested, the claims of the group do not stand or fall together.

Claims 15 and 17 depend upon claim 13, and claims 21 and 23 depend upon claim 19. The difference between claim 13 and claim 19 is simply that in claim 19 accommodation is made for a fastener to attach the faceplate directly to the box whereas in claim 13 accommodation is made for releasable fasteners indirectly to attach the faceplate to the box, through the electrical instrumentality. (In each claim accommodation is made for a fastener to attach the electrical instrumentality to the faceplate.)

ARGUMENT

Rejections under 35 U.S.C. § 112, First Paragraph

The Examiner has stated:

Claims 13-15, 17, 19-21, and 23 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Regarding claims 13 and 19, the claims set forth a connecting wall. However, the drawings show to [*sic*] separate connecting walls one on each side of the rear wall. The claims state that the connecting wall has a first end that is attached to the lateral surface and projects generally outward from the lateral surface. The second connecting wall is not specified. The claim does not set forth to what part of the lateral surface is attached. The claim sets for that a front portion is attached and projecting generally forward from the sides and the second end of the connecting wall. It is not clear how the front portion is connected to only the one connecting wall. Moreover, the first end of the front portion only requires three sides connected to the connecting wall. It is not clear how the front portion is attached to the connecting wall on three surfaces. The remaining claims are included since they stem from the rejected claims. . . .

Appellant respectfully asserts that the Examiner, in saying that the drawings show two separate connecting walls, has made an error that one of ordinary skill in the art would not make.

Lines 7 through 26 on page 8 of the Application describe the connecting wall:

Attached to and projecting generally forward from the rear wall **4** is a lateral surface **1500** that connects the perimeter **1501** of the rear wall **4** to a first

end **1502** of a connecting wall **1503** which connecting wall **1503** extends generally outward from, and preferably, perpendicular to, the lateral surface **1500**. Attached to and projecting generally forward from the second end **1504** and from the sides **1505** of the connecting wall **1503** is the first end **1506** of the front portion **11**. The second end **1507** of the front portion **11** forms the mouth **3** of the box **1**.

The top **5**, bottom **6**, and sides **7** of the rear portion **8** of the box **1** each contain a channel **9** extending into the box **1** to accommodate a releasable fastener, preferably a screw, **10**, with each channel **9** extending toward the back **4** of the box **1** and preferably being generally centrally located across the top **5**, bottom **6**, and each side **7** of the box **1**.

In the preferred embodiment, the box **1** has a rectangular cross section. As illustrated in Figure 1 and Figure 2, the front portion **11** of the box **1** extends beyond the top **5** and beyond the bottom **6** of the rear portion **8**. A top wall **12** that is preferably generally parallel to the front **3** and the back **4** of the box **1** runs from the top **5** of the rear portion **8** to the top **13** of the front portion **11** of the box **1** and between the sides **7** of the box **1**. Similarly, a bottom wall **16** that is preferably generally parallel to the front **3** and the back **4** of the box **1** runs from the bottom **6** of the rear portion **8** to the bottom **17** of the front portion **11** of the box **1** and between the sides **7** of the box **1**. Thus, in the preferred embodiment, the connecting wall **1503** is comprised of the top wall **12** and the bottom wall **16** and sides **7** which are integrally formed with the sides **7** of the rear portion **8** and the sides **7** of the front portion **11** of the box **1**.

Hence, there is only one connecting wall **1503**, even though it includes a top wall **12** and a bottom wall **16**. (It may be a slight error that is rectifiable without introducing new matter, to have, in the last paragraph of the immediately preceding quotation, referred to sides **7** of the connecting wall **1503**, instead of sides **1505** of the connecting wall **1503**, although Appellant believes this was correct since the sides of the connecting wall are identified as **1505** when the connecting wall is being considered alone and are identified as **7** when they are considered as an integral part of the entire side of the box **1**, encompassing the rear portion, the connecting wall, and the front portion of the box **1**.) All of the features are shown in Figure 3. And, in an attempt to clarify this situation for the Examiner beyond what Appellant respectfully believes

would be required for one of ordinary skill in the art, Appellant amended the specification, amended claims 13 and 19, and added Figure 7.

The amendment to the specification was as follows:

Attached to and projecting generally forward from the rear wall 4 is a lateral surface 1500 that connects the perimeter 1501 of the rear wall 4 to a first end 1502 of a connecting wall 1503 which connecting wall 1503 extends generally outward from, and preferably, perpendicular to, the lateral surface 1500. A first end 4050 of the lateral surface 1500 is connected to the perimeter 1501 of the rear wall 4, and a second end 4060 of the lateral surface 1500 is connected to the first end 1502 of the connecting wall 1503. Attached to and projecting generally forward from the second end 1504 and from the sides 1505 (At least when the box 1 has a rectangular shape, the portions of the second end 1504 of the connecting wall 1503 that is in the same plane as the sides 7 of the box 1 are termed "sides" 1505.) of the connecting wall 1503 is the first end 1506 of the front portion 11. The second end 1507 of the front portion 11 forms the mouth 3 of the box 1.

Similarly, claims 13 and 19 were amended as follows:

Claim 13 (currently amended): An Electrical Box with Recessed Faceplate, which comprises:

a faceplate comprising:

an outer portion comprising:

a flange;

an interior surface having sides, being attached to the flange, and projecting generally rearward from the flange; and

a longitudinal projection extending inward from each side of the interior surface and having a means for accommodating a releasable fastener; and

an inner portion comprising:

a rear wall with a perimeter and a cross-sectional shape, the rear wall containing one or more instrumentality apertures and having a means for accommodating a releasable fastener for attaching said faceplate to an electrical instrumentality as well as a means for accommodating a second releasable fastener; and

an interior surface projecting generally forward from the rear wall and connected to the rear wall, with the dimensions of the interior surface of the inner portion being such that the interior surface of the inner portion will fit into and slide along the interior surface of the outer portion with substantially no gaps between such interior surfaces; and

a box comprising:

a rear wall having a perimeter;

a lateral surface, having a first end attached to and projecting generally forward from the perimeter of the rear wall and having a top containing a channel, a bottom containing a channel, and sides each containing a channel, with each channel having an interior end;

a connecting wall having a first end attached to a second end of the lateral surface, the connecting wall having sides and a second end and said connecting wall extending generally outward from the lateral surface; and

a front portion having a first end attached to and projecting generally forward from the sides and the second end of the connecting wall, the front portion containing the interior ends of the channels, the front portion having a second end forming an open mouth, the front portion having substantially the

same cross-sectional shape as does the rear wall of said faceplate, and the front portion having dimensions such that the flange of the faceplate extends from the interior surface to a position laterally beyond the front of the mouth;

a means for accommodating a releasable fastener for attaching said box to an electrical instrumentality; and

a means for accommodating a releasable fastener for drawing toward said box and releasably retaining the outer portion of said faceplate.

Claim 19 (currently amended): An Electrical Box with Recessed Faceplate, which comprises:

a faceplate comprising:

an outer portion comprising:

a flange;

an interior surface having sides, being attached to the flange, and projecting generally rearward from the flange; and

a longitudinal projection extending inward from each side of the interior surface and having a means for accommodating a releasable fastener; and

an inner portion comprising:

a rear wall with a perimeter and a cross-sectional shape, the rear wall containing one or more instrumentality apertures and having a means for accommodating a fastener for attaching said faceplate to an electrical instrumentality as well as a means for accommodating a releasable fastener; and

an interior surface projecting generally forward from the rear wall and connected to the rear wall, with the dimensions of the interior surface of the inner portion being such that the interior surface of the inner portion will fit into and slide along the interior surface of the outer portion with substantially no gaps between such interior surfaces; and

a box comprising:

a rear wall having a perimeter;

a lateral surface, having a first end attached to and projecting generally forward from the perimeter of the rear wall and having a top containing a channel, a bottom containing a channel, and sides each containing a channel, with each channel having an interior end;

a connecting wall having a first end attached to a second end of the lateral surface, the connecting wall having sides and a second end and said connecting wall extending generally outward from the lateral surface; and

a front portion having a first end attached to and projecting generally forward from the sides and the second end of the connecting wall, the front portion containing the interior ends of the channels, the front portion having a second end forming an open mouth, the front portion having substantially the same cross-sectional shape as does the rear wall of said faceplate, and the front portion having dimensions such that the flange of the faceplate extends from the interior surface to a position laterally beyond the front of the mouth;

a means for accommodating a releasable fastener for attaching said box to said faceplate; and

a means for accommodating a releasable fastener for drawing toward said box and releasably retaining the outer portion of said faceplate.

And Figure 7 is shown in Attachment 1 hereto.

The Examiner has further declared:

. . . Regarding claim 13 and 19, there is no support for the “lateral surface having a first end” or the “connecting wall having a first end attached to a second end of the lateral surface”. The lateral surface was never shown as having ends. Moreover, the lateral surface having first and second ends does not make sense in light of the original drawings, claims, and disclosure. This is a new matter rejection. The remaining claims are included since they stem from rejected claims.

As noted above, lines 7 through 26 on page 8 of the Application describe the lateral surface:

Attached to and projecting generally forward from the rear wall **4** is a lateral surface **1500** that connects the perimeter **1501** of the rear wall **4** to a first end **1502** of a connecting wall **1503** which connecting wall **1503** extends generally outward from, and preferably, perpendicular to, the lateral surface **1500**. Attached to and projecting generally forward from the second end **1504** and from the sides **1505** of the connecting wall **1503** is the first end **1506** of the front portion **11**. The second end **1507** of the front portion **11** forms the mouth **3** of the box **1**.

Furthermore, the lateral surface **1500** is depicted in Figures 1 through 4. It is obvious both from the language quoted immediately above and Figures 1 through 4 that the lateral surface **1500** connects the rear wall **4** to a first end **1502** of a connecting wall **1503**. And it is apparent from Figures 1 through 4 that one extremity of the lateral surface **1500** is attached to the perimeter **1501** of the rear wall **4** while an opposite extremity of the lateral surface **1500** is connected to a first end **1502** of a connecting wall **1503**. Although the specification did not originally term the one extremity a “first end” and the opposite extremity a “second end,” it would be logical to do so since the open portions of an otherwise closed surface such as the

lateral surface **1500** are generally called “ends.” To add this logical nomenclature is, Appellant respectfully suggest, not tantamount to the introduction of new matter.

The preceding furthermore addresses the Examiner’s objection to the specification, which states, “The added material which is not supported by the original disclosure is as follows: There is no support for the ‘a second end of the lateral surface is connected to a first end of the connecting wall’ or ‘at least when the box has a rectangular shape’”. And the quotation above from lines 7 through 26 on page 8 of the Application shows that the disclosure has always indicated that, in the preferred embodiment, the box **1** has a rectangular cross section.

Notably, the Examiner comments, “The only way the original disclosure make sense are to view the connecting wall as now shown by applicant.” Certainly, one expects a person of ordinary skill in the field to interpret a disclosure in the only way it makes sense. Therefore, to one of ordinary skill in the field, the connecting wall is as it is shown in Figure 7—a fact which precludes violation of any paragraph in 35 U.S.C. § 112.

The Examiner continues, “The second change to the specification implies that the connecting wall may not be in the same plane for other shapes. There is no support for the connecting wall being out of the plane of the lateral surface.”

The language in question is “At least when the box **1** has a rectangular shape, the portions of the second end **1504** of the connecting wall **1503** that is in the same plane as the sides **7** of the box **1** are termed ‘sides’ **1505**.” This defines the term “sides” for use in the Application, especially in the claims. Again in the preceding quotation from lines 7 through 26 on page 8 of the Application, one reads, “. . . a connecting wall **1503** which connecting wall **1503** extends generally outward from, and preferably, perpendicular to, the lateral surface **1500**.” Although portions of the second end **1504** of the connecting wall **1503** may be in the same plane as the

sides 7 of the box 1, the overall connecting wall 1503 is not in the same plane as the lateral surface 1500.

In disapproving the proposed drawing correction filed on June 11, 2003, the Examiner has stated:

. . . The original disclosure does not support the showing of the connecting wall which was disclosed as including the wall segments . . . [1505] on either side of the box included the thin wall structure between the two sections or segments as seen in Proposed Fig. 7. It is clear that the box has this structure in the sidewalls. However, it is not clear that applicant had intended to show the connecting wall to include the thin sections 1502 as seen in proposed Fig. 7.

That the original disclosure does, indeed, provide such support is, Appellant respectfully believes, evident from lines 24 through 26 on page 8 of the Application:

. . . Thus, in the preferred embodiment, the connecting wall 1503 is comprised of the top wall 12 and the bottom wall 16 and sides 7 which are integrally formed with the sides 7 of the rear portion 8 and the sides 7 of the front portion 11 of the box 1.

Applicant respectfully suggests that the foregoing demonstrates that the claims in question meet the requirements of 35 U.S.C. § 112, first paragraph.

Applicant also believes that further evidence for this fact arises from the fact that the examiner in the European Patent Office found no lack of clarity and even found the claims to be patentable in PCT application no. PCTUS/2002/035791, which is virtually identical to the original Application in the present case. Such PCT application has been published by the World Intellectual Property Organization as International Publication No. WO 03/043139 A2; the International Search Report for such PCT application has been published by the World Intellectual Property Organization as International Publication No. WO 2003/043139 A3. A copy of the PCT application has been included herewith as Attachment 2; a copy of the International Search Report, as Attachment 3.

Rejections under 35 U.S.C. § 112, Second Paragraph

The Examiner's rejections under 35 U.S.C. § 112, second paragraph are identical to his rejections under 35 U.S.C. § 112 and have, consequently, been addressed above.

Appellant respectfully requests that the Board reverse the decision of the Examiner and rule that claims 13 through 15, 17, 19 through 21, and 23 comply with the requirements of both the first and second paragraphs in 35 U.S.C. § 112.

APPENDIX
OF
CLAIMS INVOLVED IN THE APPEAL

The claims are as follows:

1 Claim 13 (currently amended): An Electrical Box with Recessed Faceplate, which
2 comprises:

3 a faceplate comprising:

4 an outer portion comprising:

5 a flange;

6 an interior surface having sides, being attached to the flange, and
7 projecting generally rearward from the flange; and

8 a longitudinal projection extending inward from each side of the
9 interior surface and having a means for accommodating a releasable
10 fastener; and

11 an inner portion comprising:

12 a rear wall with a perimeter and a cross-sectional shape, the rear
13 wall containing one or more instrumentality apertures and having a means
14 for accommodating a releasable fastener for attaching said faceplate to an
15 electrical instrumentality as well as a means for accommodating a second
16 releasable fastener; and

17 an interior surface projecting generally forward from the rear wall
18 and connected to the rear wall, with the dimensions of the interior surface
19 of the inner portion being such that the interior surface of the inner portion
20 will fit into and slide along the interior surface of the outer portion with
21 substantially no gaps between such interior surfaces; and

22 a box comprising:

23 a rear wall having a perimeter;

24 a lateral surface, having a first end attached to and projecting generally
25 forward from the perimeter of the rear wall and having a top containing a channel,

26 a bottom containing a channel, and sides each containing a channel, with each
27 channel having an interior end;

28 a connecting wall having a first end attached to a second end of the lateral
29 surface, the connecting wall having sides and a second end and said connecting
30 wall extending generally outward from the lateral surface; and

31 a front portion having a first end attached to and projecting generally
32 forward from the sides and the second end of the connecting wall, the front
33 portion containing the interior ends of the channels, the front portion having a
34 second end forming an open mouth, the front portion having substantially the
35 same cross-sectional shape as does the rear wall of said faceplate, and the front
36 portion having dimensions such that the flange of the faceplate extends from the
37 interior surface to a position laterally beyond the front of the mouth;

38 a means for accommodating a releasable fastener for attaching said box to
39 an electrical instrumentality; and

40 a means for accommodating a releasable fastener for drawing toward said
41 box and releasably retaining the outer portion of said faceplate.

1 Claim 14 (original): The Electrical Box with Recessed Faceplate as recited in claim 13,
2 wherein:

3 the means for accommodating a releasable fastener in the longitudinal projection
4 is an aperture when the releasable fastener accommodated thereby is a screw;

5 the means for accommodating a releasable fastener for attaching said faceplate to
6 an electrical instrumentality which means comprises part of the faceplate is one or more
7 apertures in the faceplate as well as one or more apertures in the connecting wall when
8 the fastener for attaching said faceplate to an electrical instrumentality is a screw;

9 the means for accommodating a releasable fastener for attaching said box to an
10 electrical instrumentality is a covered interior end having a threaded aperture for the
11 channel on the top of the lateral surface of the box and a covered interior end having a
12 threaded aperture for the channel on the bottom of the lateral surface of the box;

13 the means for accommodating a releasable fastener for drawing toward said box
14 and releasably retaining the outer portion of said faceplate is a covered interior end

15 having a threaded aperture for the channels on the sides of the lateral surface of the box
16 so that said threaded aperture can receive screws which pass through the apertures in the
17 longitudinal projections; and

18 the means for accommodating a second releasable fastener in the rear wall of the
19 faceplate is an aperture.

1 Claim 15 (original): The Electrical Box with Recessed Faceplate as recited in claim 14,
2 wherein:

3 said faceplate and said box each have a rectangular cross section.

1 Claim 17 (original): The Electrical Box with Recessed Faceplate as recited in claim 13,
2 wherein:

3 said faceplate and said box each have a rectangular cross section.

1 Claim 19 (currently amended): An Electrical Box with Recessed Faceplate, which
2 comprises:

3 a faceplate comprising:

4 an outer portion comprising:

5 a flange;

6 an interior surface having sides, being attached to the flange, and
7 projecting generally rearward from the flange; and

8 a longitudinal projection extending inward from each side of the
9 interior surface and having a means for accommodating a releasable
10 fastener; and

11 an inner portion comprising:

12 a rear wall with a perimeter and a cross-sectional shape, the rear
13 wall containing one or more instrumentality apertures and having a means
14 for accommodating a fastener for attaching said faceplate to an electrical
15 instrumentality as well as a means for accommodating a releasable
16 fastener; and

17 an interior surface projecting generally forward from the rear wall
18 and connected to the rear wall, with the dimensions of the interior surface
19 of the inner portion being such that the interior surface of the inner portion

20 will fit into and slide along the interior surface of the outer portion with
21 substantially no gaps between such interior surfaces; and
22 a box comprising:
23 a rear wall having a perimeter;
24 a lateral surface, having a first end attached to and projecting generally
25 forward from the perimeter of the rear wall and having a top containing a channel,
26 a bottom containing a channel, and sides each containing a channel, with each
27 channel having an interior end;
28 a connecting wall having a first end attached to a second end of the lateral
29 surface, the connecting wall having sides and a second end and said connecting
30 wall extending generally outward from the lateral surface; and
31 a front portion having a first end attached to and projecting generally
32 forward from the sides and the second end of the connecting wall, the front
33 portion containing the interior ends of the channels, the front portion having a
34 second end forming an open mouth, the front portion having substantially the
35 same cross-sectional shape as does the rear wall of said faceplate, and the front
36 portion having dimensions such that the flange of the faceplate extends from the
37 interior surface to a position laterally beyond the front of the mouth;
38 a means for accommodating a releasable fastener for attaching said box to
39 said faceplate; and
40 a means for accommodating a releasable fastener for drawing toward said
41 box and releasably retaining the outer portion of said faceplate.

1 Claim 20 (original): The Electrical Box with Recessed Faceplate as recited in claim 19,
2 wherein:

3 the means for accommodating a releasable fastener in the longitudinal projection
4 is an aperture when the releasable fastener accommodated thereby is a screw;

5 the means for accommodating a releasable fastener in the rear wall of the
6 faceplate is one or more apertures in the rear wall of the faceplate when the releasable
7 fastener is a screw; and

8 the means for accommodating a releasable fastener for attaching said box to said
9 faceplate is a covered interior end having a threaded aperture for the channel on the top of
10 the lateral surface of the box and a covered interior end having a threaded aperture for the
11 channel on the bottom of the lateral surface of the box when the releasable fastener is a
12 screw that will pass through the aperture in the rear wall of the faceplate; and

13 the means for accommodating a releasable fastener for drawing toward said box
14 and releasably retaining the outer portion of said faceplate is a covered interior end
15 having a threaded aperture for the channels on the sides of the lateral surface of the box
16 so that said threaded aperture can receive screws which pass through the apertures in the
17 longitudinal projections.

1 Claim 21 (original): The Electrical Box with Recessed Faceplate as recited in claim 20,
2 wherein:

3 said faceplate and said box each have a rectangular cross section.

1 Claim 23 (original): The Electrical Box with Recessed Faceplate as recited in claim 19,
2 wherein:

3 said faceplate and said box each have a rectangular cross section.

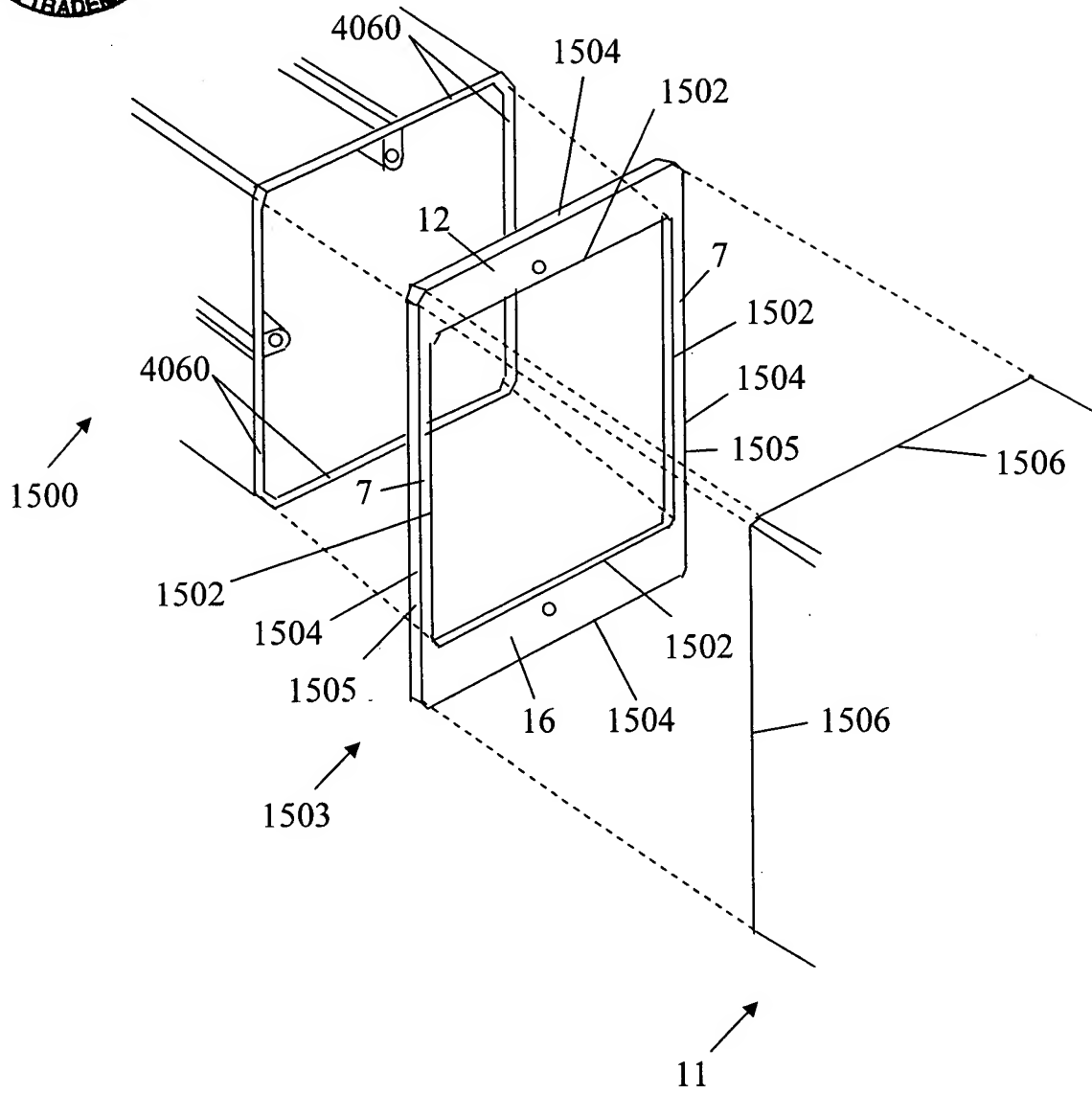


Figure 7



Attachment 2

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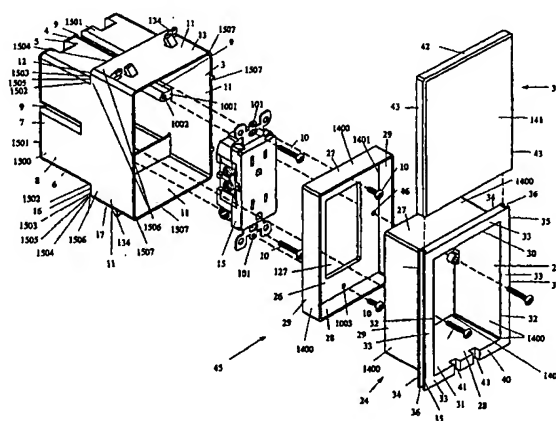
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(54) Title: ELECTRICAL BOX WITH RECESSED FACEPLATE



(57) Abstract: An electrical box with recessed faceplate having a one-piece recessed faceplate (2) and adapted to accommodate a two-piece recessed faceplate (25). A rear portion (8) contains channels (9) on the top (5), bottom (6), and sides (7). A connecting wall (1503) attaches the rear portion (8) to the front portion (11). The connecting wall (1503) extends beyond the rear portion (8) and preferably contains one or more apertures (19, 20) to accommodate releasable fasteners such as screws (10). These apertures (19, 20) and the channels (9) assure that no screws (10) or analogous components or another type or releasable fastener are exposed within the box (1). The two-piece recessed faceplate (25) has an inner portion (45) and an outer portion (24) which slide along each other in order to enable the box (1) to be mounted at different distances from the mounting surface. Optionally, a removable cover (39) extends across the mouth (3) of the faceplate (2, 25). An extender (47) is also available for converting traditional electrical boxes (46) into a box that can accommodate a recessed faceplate (2, 25). And an alternative electrical box (600) holds switches (619) and is L-shaped.

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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

DESCRIPTION

ELECTRICAL BOX WITH RECESSED FACEPLATE

5 TECHNICAL FIELD

This invention relates to boxes for containing the wide variety of electrical equipment that is traditionally installed within electrical boxes, such as receptacles, modular telephone jacks, stationary connectors for coaxial cables, switches, and the like.

10

BACKGROUND ART

Electrical equipment, such as receptacles, modular telephone jacks, stationary connectors for coaxial cables, switches, and the like is placed in the walls of almost all modern buildings. Into such devices, electrical connectors of various configurations
15 can be removably inserted to provide a pathway for electricity to be supplied to such device to perform a variety of tasks, including powering an electrical appliance or carrying a signal for a telephone, computer, or television:

The standard faceplate for electrical instrumentalities, *i.e.*, receptacles, modular telephone jacks, stationary connectors for coaxial cables, switches, and the like, is
20 basically a planar device which fits closely against the exterior surface of the wall and is attached, directly or indirectly, to a standard electrical box. An electrical box is the metallic or plastic box which contains one or more electrical receptacles (usually two or four), modular telephone jacks, stationary connectors for coaxial cables, switches, or the like, *i.e.*, electrical instrumentalities, that are permanently connected to the electrical
25 wiring of the building.

Most electrical instrumentalities are connected with screws to the electrical box; the faceplate then is generally connected with screws or by snap-fitting to the electrical instrumentality and is thereby indirectly connected to the electrical box. Other electrical instrumentalities are attached to the faceplate, and the faceplate is directly
30 connected with screws or by snap-fitting to the electrical box. In either case, one or more apertures, designated herein the instrumentality apertures, accommodate the portions of the electrical instrumentalities that are intended to be exposed.

Unlike a standard faceplate, a recessed faceplate, however, has only an edge which fits closely against the exterior surface of the wall; the portion of the recessed

wall plate that is in the same plane as the exterior surfaces of the electrical outlets is some distance inward from the surface of the wall.

5 Recessed faceplates for receptacles, modular telephone jacks, stationary connectors for coaxial cables, and the like, *i.e.*, electrical instrumentalities, provide the advantage that only the electrical cords, telephone lines, or cables of an electrical appliance (if the electrical connector that is physically associated with a particular electrical appliance is attached to a cord, line, or cable, rather than being directly connected to the appliance) will extend outward from the plane that forms the surface of a wall into which a receptacle, modular telephone jack, stationary connector for
10 coaxial cables, or the like, *i.e.*, an electrical instrumentality, has been mounted. And in the case of switches, nothing will extend beyond the plane of the wall.

Two sections of the National Electrical Code are especially important for an electrical box with a recessed faceplate.

Section 370-20 provides, "In walls or ceilings of concrete, tile, or other
15 noncombustible material, boxes shall be installed so that the front edge of the box will not be set back of the finished surface more than $\frac{1}{4}$ in. (6.35 mm). In walls and ceilings constructed of wood or other combustible material, boxes shall be flush with the finished surface or project therefrom."

And section 410-56 (e) states, in pertinent part, "Faceplates shall be installed so
20 as to completely cover the opening and seat against the mounting surface."

The present inventor is aware of a number of United States patents for electrical boxes with a recessed faceplate, *viz.*, United States patent nos. 4,059,327; 4,936,794; 4,988,832; 5,257,946; 5,387,761; and 5,574,256. None of these, however, have the ability to accommodate a recessed faceplate adapted to be extended so that, after
25 installation of the box, the faceplate can be adjusted so that the faceplate meets the preceding requirements of the National Electrical Code; nor do they provide a mechanism for adapting a traditional electrical box to accommodate a recessed faceplate.

United States patent no. 4,059,327 just has a fixed bracket 20 and 24 against
30 which a cover plate rigidly mounts in only one possible position. United States patent no. 4,936,794 simply has a recessed faceplate 26 rigidly attached to a tab 18 or 18a in only one possible position for a given embodiment of the box; and, in the embodiment using tab 18a, a slot 36 leaves an opening in the box, albeit on the outer side of the

outlet. United States patent no. 4,988,832 employs a faceplate termed a bracket 12 rigidly attached to a stanchion 40, 42 in the box termed a housing 10 in only one possible position. United States patent no. 5,257,946 has a recessed cover plate 26 with a rear portion 48 that can be rigidly attached in only one possible position, with a screw, to the outlet, which is attached to the outlet box. United States patent no. 5,387,761 possesses a faceplate 36 that has a recess 42 that is only deep enough to accommodate a cover 54; the faceplate 36 can be rigidly attached to the electrical box 14 in only one possible position. And in the device of United States patent no. 5,574,256, the outlet 20 is attached to a recessed wall 16 that is an integral portion of the box 10; and the faceplate 30 mounts to the front of the box 10 in only one possible position.

Two of the preceding patents, *viz.*, nos. 4,988,832 and 5,387,761 include reclosable covers; no. 5,574,256 has a cover that is screwed in place; and United States patent no. 5,272,281 applies to an electrical outlet safety cover that is screwed in place. None of such covers, however, can be slid onto a faceplate.

Three patents, *i.e.*, United States patent no. 3,530,230; United States patent no. 4,090,769; and United States patent no. 4,918,259 are, though known for modifying electrical boxes that have already been installed.

United States patent no. 3,530,230 discloses two embodiments. The first has an outer frame member 12 and a cover plate 14; the second, an outer frame 40 and a cover plate 46. In both embodiments, however, there is a gap between the walls 18, 42 and the electrical box 30, 64. The distance between the cover plate 14, 46 and the outer frame 12, 40 is only discretely (not continuously adjustable); the outer frame 12, 40 isn't fastened to anything; and, if the frame member 12 is flush against the wall, the cover plate 14 may not even touch the outlet because the distance between scoring of the tabs 20 may create a stop for the back of the cover plate 14 that is some distance in front of the outlet.

The device of United States patent no. 4,090,769 just plugs into an existing outlet, does not extend the electrical box, and has no indication that distance it extends from the existing electrical box is adjustable.

And United States patent no. 4,918,259 explicitly indicates that it does not extend the electrical box by stating, "The intent of the present invention is not to extend the receptacles, but rather to extend the cover" Moreover, the distance between

the face of the cover frame 36 and the outlet is only discretely (not continuously) adjustable; and the cover frame 36 does not screw into place.

Finally, no electrical box is known to the Inventor wherein switches are mounted so that, upon installation, the faces of the switches will be other than generally
5 in the same plane as the wall of the building in which the electrical box is located.

DISCLOSURE OF INVENTION

The present invention includes both a new electrical box with a recessed faceplate and an electrical box with a recessed faceplate that is created by modifying a
10 traditional electrical box.

Both have a one-piece faceplate; but the new electrical box is also designed to accommodate a two-part faceplate which permits adjusting the distance between the outward surface of the electrical instrumentality installed within the electrical box and the flange at the front of the faceplate so that, after installation of the box, it can be
15 assured that the flange of the faceplate will be flush against the wall in which the electrical box has been installed and that a wall of the faceplate will be flush against the outward surface of the installed electrical equipment, thereby meeting, in a relatively easy fashion, the previously cited portions of the National Electrical Code.

Furthermore, no screws or other components of a releasable fastener not
20 employing screws are exposed in any of the versions of the electrical box; and once the electrical instrumentality is installed within the box, there are no openings in the electrical box.

The preceding is basically accomplished by enlarging both the height and width of the mouth of the electrical box as well as adding threaded channels to the sides of the
25 electrical box.

An extender is used with a traditional electrical box to create the ability to install electrical instrumentalities within the assembled electrical box in a recessed aspect while still insuring that the assembled box extends sufficiently close to the finished surface of the wall in which the electrical box has been installed to meet the
30 relevant portions of the National Electrical Code.

Optionally, a sliding cover may be removably attached over either the one-piece or the two-piece recessed faceplate.

An additional embodiment is a new electrical box for one or more switches wherein the switches are to be oriented so that upon installation the faces of the

switches will be other than parallel to the wall of building in which the electrical box is placed.

BRIEF DESCRIPTION OF DRAWINGS

5 Figure 1 illustrates an Electrical Box with Recessed Faceplate having a one-piece box recessed faceplate but designed to accommodate a two-piece recessed faceplate.

Figure 2 is the same embodiment as that of Figure 1 with the addition of a sliding cover.

10 Figure 3 depicts an Electrical Box with Recessed Faceplate having a two-piece recessed faceplate.

Figure 4 is the same embodiment as that of Figure 3 with the addition of a sliding cover.

15 Figure 5 shows an Electrical Box with Recessed Faceplate that is created by modifying a traditional electrical box.

Figure 6 portrays an Electrical Box with Recessed Faceplate for switches wherein the switches are to be oriented so that upon installation the faces of the switches will be other than parallel to the wall of building in which the electrical box is placed.

20 MODES FOR CARRYING OUT THE INVENTION

The Electrical Box with Recessed Faceplate having a one-piece recessed faceplate but designed to accommodate a two-piece recessed faceplate has, as illustrated in Figure 1, a box (1) into which a one-piece recessed faceplate (2) is
25 removably inserted.

The box (1) has an open front or mouth (3) and a closed back (4), although the rear wall (4) contains the knock-out tabs that are well known in the art for creating openings through which wiring can pass.

Attached to and projecting generally forward from the rear wall (4) is a lateral
30 surface (1500) that connects the perimeter (1501) of the rear wall (4) to a first end (1502) of a connecting wall (1503) which connecting wall (1503) extends generally outward from, and preferably, perpendicular to, the lateral surface (1500). Attached to and projecting generally forward from the second end (1504) and from the sides (1505)

of the connecting wall (1503) is the first end (1506) of the front portion (11). The second end (1507) of the front portion (11) forms the mouth (3) of the box (1).

The top (5), bottom (6), and sides (7) of the rear portion (8) of the box (1) each contain a channel (9) extending into the box (1) to accommodate a releasable fastener, preferably a screw, (10), with each channel (9) extending toward the back (4) of the box (1) and preferably being generally centrally located across the top (5), bottom (6), and each side (7) of the box (1). In the embodiments of Figures 1 through 4, the top (5), bottom (6), and sides (7) of the rear portion (8) of the box (1) comprise the lateral surface (1500).

In the preferred embodiment, the box (1) has a rectangular cross section. As illustrated in Figure 1 and Figure 2, the front portion (11) of the box (1) extends beyond the top (5) and beyond the bottom (6) of the rear portion (8). A top wall (12) that is preferably generally parallel to the front (3) and the back (4) of the box (1) runs from the top (5) of the rear portion (8) to the top (13) of the front portion (11) of the box (1) and between the sides (7) of the box (1). Similarly, a bottom wall (16) that is preferably generally parallel to the front (3) and the back (4) of the box (1) runs from the bottom (6) of the rear portion (8) to the bottom (17) of the front portion (11) of the box (1) and between the sides (7) of the box (1). Thus, in the preferred embodiment, the connecting wall (1503) is comprised of the top wall (12) and the bottom wall (16) and sides (7) which are integrally formed with the sides (7) of the rear portion (8) and the sides (7) of the front portion (11) of the box (1).

As suggested above, the interior ends (1001) of the channels (9) lie within the front portion (11) of the box (1); such ends (1001) are preferably covered except for a threaded aperture (1002) in such ends (1001) and are preferably all substantially aligned with one another.

The channels (9) and, in the preferred embodiment, the threaded apertures (1002) of the upper and lower channels (9) are used either to attach an electrical instrumentality (15) or a faceplate to the box (1). Whether the attachment is for an electrical instrumentality (15) or a faceplate is determined by whether the electrical instrumentality (15) is intended to be attached to the faceplate or directly to the box (1). This is the same situation as for traditional electrical boxes. If the electrical instrumentality (15) is intended to be attached directly to the box (1), the threaded apertures (1002) of the upper and lower channels (9) each accommodate a screw (10)

for holding the electrical instrumentality (15) to the box (1), as illustrated in Figure 1 through Figure 4. Otherwise, the threaded apertures (1002) of the upper and lower channels (9) would be available to retain a screw (10) for holding the faceplate to the box (1).

5 Furthermore, as is the case with traditional faceplates, attachment of an electrical instrumentality (15) to a faceplate can be permanent or releasable, at least when the faceplate is intended to be attached directly to the box (1).

Retention of faceplates, whether one-piece or two-piece, to electrical boxes (1) is, as indicated above, preferably done with screws (10), as illustrated in Figure 1
10 through Figure 4, since screws tend to pull the faceplate against the mounting surface. However, the only essential feature is that a releasable fastener be used to hold the faceplate either directly to the box (1) or indirectly to the box (1) by having the faceplate directly attached, with a releasable fastener, to an electrical instrumentality (15) that is, itself, directly connected to the box (1) with a releasable fastener. Thus, for
15 example, any type of snap-fit for a faceplate to the box (1) or to the electrical instrumentality (15) that is well known in the art may be employed:

For the embodiments depicted in Figure 1 through Figure 4, the top wall (12) contains an aperture (19) to accommodate a screw (10) that extends through the top wall (12) outside the box (1). Similarly, the bottom wall (16) contains an aperture (20)
20 to accommodate a screw (10) that extends through the bottom wall (16) outside the box (1) for the same purpose as the aperture (19). Apertures (19, 20) accommodate screws (10) which are used to attach faceplates to the type of electrical instrumentality (15) depicted in Figure 1 through Figure 4, using threaded aperture (101) of the electrical instrumentality (15). For different electrical instrumentalities, however, the number
25 and location of apertures for attaching a faceplate to an electrical instrumentality (15) depend upon particular electrical instrumentality (15) that is utilized.

The channels (9) on the sides (7) of the box (1) and their associated threaded apertures (1002) accommodate screws (10) to draw toward the box (1) and retain the outer portion (24) of a two-piece recessed faceplate (25), as shown in Figure 3.

30 The one-piece recessed faceplate (2) has a rear wall (26) containing one or more instrumentality apertures (127) to accommodate the electrical instrumentality (15). Attached to and projecting generally forward from the rear wall (26) is an interior surface (1400) that connects the perimeter (1401) of the rear wall (26) to a flange (33).

The rear wall (26) has substantially the same shape as does the cross section of the front portion (11) of the box (1). In the case of a box (1) having a traditionally rectangular cross section, as depicted in Figure 1 and Figure 2, the interior surface (1400) comprises a top (27), bottom (28), and two sides (29) attached to one another so as to form a four-sided object. To the front (30) of the top (27), the front (31) of the bottom (28), and the front (32) of the two sides (29) is attached a flange (33), the back side (34) of which flange (33) is designed to seat against the mounting surface. The faceplate (2) has, in comparison to the box (1), dimensions such that the flange (33) extends from the interior surface (1400) of the box (1) to a position laterally beyond the front of the mouth (3).

The rear wall (26) is also adapted to accommodate a releasable fastener for fastening the faceplate (2) directly or indirectly, through the electrical instrumentality (15), to the box (1). Preferably, this consists of one or more apertures (1003) to accommodate screws (10).

Thus, the Electrical Box with Recessed Faceplate having a one-piece recessed faceplate has a box (1) adapted to accommodate a two-piece recessed faceplate (25); has no screws (10) or analogous components of another type of releasable fastener exposed within the box (1) behind the installed electrical equipment (15), and possesses no substantial gaps or apertures other than those designed to accommodate the installed electrical equipment (15) and screws (10) or components of another type of releasable fastener. The description to this point has concentrated upon the embodiments depicted in Figure 1 through Figure 4. Any embodiment utilizing the inventive features described in the first sentence of this paragraph would, however, fall within the scope of this invention, e.g., the cross section of the box (1) need not necessarily be rectangular.

Attached to the top (13) of the front portion (11) or to the top (5) of the rear portion (8) of the box (1), but preferably to the top (13) of the front portion (11) of the box (1), and also to the bottom (17) of the front portion (11) or to the bottom (6) of the rear portion (8) of the box (1), but preferably to the bottom (17) of the front portion (11) of the box (1), are projections (134) between which nails can be inserted to fasten the box (1) to a surface, preferably a stud.

As shown in Figure 2, the sides (35) of the flange (33) optionally contain channels (36) running along the edge (37) of the flange (33) to accommodate

longitudinal tabs (38) of a cover (39) so that the cover (39) can be removably placed over the Electrical Box with Recessed Faceplate. In the embodiment of Figure 2, the lower portion (40) of the flange (33) contains one or more indentations (41) to accommodate the electrical cords, telephone lines, or cables of any electrical instrumentality that may be plugged into the receptacle (15).
5

The cover (39) preferably has a front surface (141), a top (42) connected to the front surface (141), and two sides (43) each of which is connected to the front surface (141) and to the top (42) to form a four-sided structure. The longitudinal tabs (38) extend inward from each side (43), and the top (42) functions as a stop to preclude the cover (39) from sliding below the flange (33).
10

The outer portion (24) of the two-piece recessed faceplate (25) is constructed just as is the one-piece recessed faceplate (2) except that such outer portion (24) does not have a rear wall (26) but instead has attached to each side (29) a longitudinal projection (201) extending inward having an aperture (44) to accommodate a screw (10) or other releasable fastener that will draw toward the box (1), and retain, the outer portion (24) of the two-piece recessed faceplate (25). This pulls the back side (34) of the flange (33) against the mounting surface.
15

The inner portion (45) of the two-piece recessed faceplate (25) is constructed the same as the one-piece recessed faceplate (2) except that it does not have the flange (33) but does possess the number of apertures (46), two apertures (46) in the case of screws (10), to accommodate the releasable fasteners that draw the outer portion (24) of the two-piece recessed faceplate (25) to the box (1).
20

The top (27), bottom (28), and two sides (29) for the outer portion (24) of the two-piece recessed faceplate (25) are sized so that they will slide along the inside of the top (27), bottom (28), and two sides (29), respectively, of the inner portion (45) in order that there will substantially be no gaps between these corresponding features.
25

As depicted in Figure 4, the outer portion (24) of the two-piece recessed faceplate (25) optionally is designed, just as is the one-piece recessed faceplate (2), to have a cover (39).

The one-piece recessed faceplate (2) is also utilized with the embodiment of Figure 5, which employs a traditional electrical box (46).
30

An extender (47) is placed around the traditional electrical box (46) to create an electrical box that is designed to have the electrical instrumentality (15) located in

essentially the same position as with the unmodified traditional electrical box (46) but having the electrical box extend beyond that position.

The extender (47) has a first side (48) and a second side (49) constructed to slide along the outside surface of the sides (7) of the traditional electrical box (46), preferably leaving no substantial gaps between the sides (7) of the traditional electrical box (46) and the sides (48, 49) of the extender (47). Because the traditional electrical box (46) has two projections (50) on the side (7) along which the second side (49) of the extender (47) slides, the second side (49) of the extender (47) contains two channels (51) to accommodate the projections (50).

At a distance, from the back (52) of the sides (48, 49) of the extender (47), greater than the distance between the open front (3) of the traditional electrical box (46) and the projections (134) to hold nails (401), and preferably a distance substantially equal to the distance between the open front (3) and the closed back (4) of the traditional electrical box (46), a wall (53) is attached to the sides (48, 49) and runs from the bottom (54) to the top (55) of the sides (48, 49) of the extender (47) and from the first side (48) to the second side (49) of the extender (47). The sides (48, 49) and the wall (53) of the extender (47) proceed both above and below the traditional electrical box (46). Each side (48, 49) contains an aperture (301) that will be above a height equal to the top (5) and an aperture (302) that will be below the level of the bottom (6) of a traditional electrical box (46), with such apertures (301, 302) also being at a position that will be in general alignment with the projections (134) when the extender (47) is placed on a traditional electrical box (46). The apertures (301, 302) then accommodate the nails (401) that go through the projections (134).

Contained within the wall (53) are one or more instrumentality apertures (154) to accommodate the electrical instrumentality (15). The one or more instrumentality apertures (154) can extend as far as desired toward the sides (48, 49), even reaching the sides (48, 49).

The wall (53) also has a lower aperture (55) and an upper aperture (56), placed so as to be generally aligned with the lower channel (9) and upper channel (9) of a traditional electrical box (46) when the extender (47) has been placed on a traditional electrical box (46), for screws (10) that will extend into the upper and lower channels (9) of the traditional electrical box (46) to fasten an electrical instrumentality (15) or a faceplate to the traditional electrical box (46). Optionally, below the lower aperture

(55) is an aperture (57) to accommodate a screw (10) that extends through the wall (53) below the bottom (6) of the traditional electrical box (46). Similarly and optionally, above the upper aperture (56) is an aperture (59). Apertures (57, 59) accommodate screws (10) which are used to attach faceplates to the type of electrical instrumentality (15) depicted in Figure 5, using threaded aperture (101) of the electrical instrumentality (15). The number and location of apertures for attaching a faceplate to an electrical instrumentality depend upon the particular electrical instrumentality (15) that is utilized.

Whether the attachment using apertures (55, 56) is for an electrical instrumentality (15) or the wall (53) is determined by whether the electrical instrumentality (15) is intended to be attached to the wall (53) or directly to the traditional electrical box (46). This is the same situation as for the new electrical box. If the electrical instrumentality (15) is intended to be attached directly to the traditional electrical box (46), the threaded apertures (1002) of the upper and lower channels (9) each accommodate a screw (10) for holding the electrical instrumentality (15) to the traditional electrical box (46), as illustrated in Figure 5. Otherwise, the threaded apertures (1002) of the upper and lower channels (9) would be available to retain a screw (10) for holding the wall (53) to the traditional electrical box (46).

Furthermore, as is the case with traditional faceplates, attachment of an electrical instrumentality (15) to the wall (53) can be permanent or releasable.

An upper segment (1020) runs along and is attached to the top (1021) of the wall (53) between the sides (48, 49) of the extender (47) from the wall (53) to the front (1022) of the sides (48, 49) and is also attached to the top (55) of the sides (48, 49). Similarly, a lower segment (1030) runs along and is attached to the bottom (1031) of the wall (53) between the sides (48, 49) of the extender (47) from the wall (53) to the front (1022) of the sides (48, 49) and is also attached to the bottom (54) of the sides (48, 49).

Finally, a particular version of an Electrical Box with Recessed Faceplate is a switch box (600) which has two generally L-shaped sides (601), a back panel (602) running the length of and attached to a first end (603) of each L-shaped side (601), a bottom panel (604) attached to and running between the bottom (605) of the L-shaped sides (601) and also running along and attached to the bottom (606) of the back panel (602), a front panel (607) attached to a second end (608) of each L-shaped side (601)

running between the L-shaped sides (601) from the bottom (605) of the L-shaped sides (601) to the vertex (609) of the L and also attached to the bottom panel (604), and a U-shaped ledge (610) having the inside (611) of the bottom (612) of the U-shaped ledge (610) attached to the top (613) of the front panel (607) and the outside (614) of the legs (615) of the U-shaped ledge (610) attached to the generally L-shaped sides (601) in substantial alignment with the inside edge (616) of the shorter leg (617) of the L.

Thus, an aperture (618) exists in the U-shaped ledge (610) to accommodate a switch (619). A threaded aperture (620) in each leg (615) of the U-shaped ledge (610) accommodates a screw (10) to hold the switch (619) in place.

A primary aperture (621), consequently, also exists above the front panel (607). An insert (622) having a top (623), bottom (624), and two sides (625) has an aperture (626) in the bottom (624) to accommodate the switch (619). The insert (622) slidably mounts within the primary aperture (621), *i.e.*, above the U-shaped ledge (610). An aperture (627) in one or more ends (628) of the bottom (624) of the insert (622) is designed to be substantially aligned with one or more secondary threaded apertures (629) in the legs (615) of the U-shaped ledge (610) after the insert (622) has been placed into the primary aperture (621) in order to accommodate a screw (10) to hold the insert (622) in place.

Finally, a flange (630) extends from the outer edges (631) of the insert (622) generally perpendicular to the top (623), bottom (624), and two sides (625) of the insert (622). The flange (630) is designed to seat substantially against the mounting surface.

Whenever in the preceding discussion a threaded aperture has been mentioned, a non-threaded aperture could, instead, be used together with a threaded nut; and the term "threaded aperture" is intended to encompass such structure.

INDUSTRIAL APPLICABILITY

The way in which the Electrical Box with Recessed Faceplate is capable of exploitation in industry and the way in which the Electrical Box with Recessed Faceplate can be made and used are obvious from the description and the nature of the Electrical Box with Recessed Faceplate.

CLAIMS

I claim:

1. An Electrical Box with Recessed Faceplate, which comprises:

a faceplate (2) comprising:

5 a rear wall (26) with a perimeter (1401) and a cross-sectional shape, the rear wall (26) containing one or more instrumentality apertures (127) and having a means for accommodating a releasable fastener for attaching said faceplate (2) to an electrical instrumentality (15);

10 a flange (33); and

an interior surface (1400) projecting generally forward from the rear wall (26) and connecting the rear wall (26) to the flange (33); and

a box (1) comprising:

a rear wall (4) having a perimeter (1501);

15 a lateral surface (1500) attached to and projecting generally forward from the perimeter (1501) of the rear wall (4) and having a top (5) containing a channel (9), a bottom (6) containing a channel (9), and sides (7) each containing a channel (9), with each channel (9) having an interior end (1001);

20 a connecting wall (1503) having a first end (1502) attached to the lateral surface (1500), the connecting wall (1503) having sides (1505) and a second end (1504) and said connecting wall (1503) extending generally outward from the lateral surface (1500); and

25 a front portion (11) having a first end (1506) attached to and projecting generally forward from the sides (1505) and the second end (1504) of the connecting wall (1503), the front portion (11) containing the interior ends (1001) of the channels (9), the front portion (11) having a second end (1507) forming an open mouth (3), the front portion (11) having substantially the same cross-sectional shape as does the rear wall (26) of said faceplate (2), and the front portion (11) having dimensions
30 such that the flange (33) of the faceplate (2) extends from the interior surface (1400) to a position laterally beyond the front of the mouth (3);
and

a means for accommodating a releasable fastener for attaching said box (1) to an electrical instrumentality (15).

2. The Electrical Box with Recessed Faceplate as recited in claim 1, wherein:

5 the means for accommodating a releasable fastener for attaching said faceplate (2) to an electrical instrumentality (15) which means comprises part of the faceplate (2) is one or more apertures (1003) in said faceplate (2) as well as one or more apertures (19, 20) in the connecting wall (1503) when the fastener for attaching said faceplate (2) to an electrical instrumentality (15) is a screw
10 (10); and

the means for accommodating a releasable fastener for attaching said box (1) to an electrical instrumentality (15) is a covered interior end (1001) having a threaded aperture (1002) for the channel (9) on the top (5) of the lateral surface (1500) of the box (1) and a covered interior end (1001) having a
15 threaded aperture (1002) for the channel (9) on the bottom (6) of the lateral surface (1500) of the box (1).

3. The Electrical Box with Recessed Faceplate as recited in claim 2, wherein:

said faceplate (2) and said box (1) each have a rectangular cross section.

20 4. The Electrical Box with Recessed Faceplate as recited in claim 3, further comprising:

a cover (39) having a front surface (141), a top (42) connected to the front surface (141), two sides (43) each of which is connected to the front surface (141), and longitudinal tabs (38) extending inward from each side (43);
25 and

wherein said flange (33) has sides (35), each side (35) containing a channel (36) running along an edge (37) of said flange (33) to accommodate the longitudinal tabs (38) of said cover (39).

5. The Electrical Box with Recessed Faceplate as recited in claim 1, wherein:

said faceplate (2) and said box (1) each have a rectangular cross section.

6. The Electrical Box with Recessed Faceplate as recited in claim 5, further comprising:

a cover (39) having a front surface (141), a top (42) connected to the front surface (141), two sides (43) each of which is connected to the front surface (141), and longitudinal tabs (38) extending inward from each side (43); and

5 wherein said flange (33) has sides (35), each side (35) containing a channel (36) running, along an edge (37) of said flange (33) to accommodate the longitudinal tabs (38) of said cover (39).

7. An Electrical Box with Recessed Faceplate, which comprises:

a faceplate (2) comprising:

10 a rear wall (26) with a perimeter (1401) and a cross-sectional shape, the rear wall (26) containing one or more instrumentality apertures (127) and having a means for accommodating a fastener for attaching said faceplate (2) to an electrical instrumentality (15) as well as a means for accommodating a releasable fastener;

15 a flange (33); and

an interior surface (1400) projecting generally forward from the rear wall (26) and connecting the rear wall (26) to the flange (33); and

a box (1) comprising:

a rear wall (4) having a perimeter (1501);

20 a lateral surface (1500) attached to and projecting generally forward from the perimeter (1501) of the rear wall (4) and having a top (5) containing a channel (9), a bottom (6) containing a channel (9), and sides (7) each containing a channel (9), with each channel (9) having an interior end (1001);

25 a connecting wall (1503) having a first end (1502) attached to the lateral surface (1500), the connecting wall (1503) having sides (1505) and a second end (1504) and said connecting wall (1503) extending generally outward from the lateral surface (1500); and

30 a front portion (11) having a first end (1506) attached to and projecting generally forward from the sides (1505) and the second end (1504) of the connecting wall (1503), the front portion (11) containing the interior ends (1001) of the channels (9), the front portion (11) having a second end (1507) forming an open mouth (3), the front portion (11)

having substantially the same cross-sectional shape as does the rear wall (26) of said faceplate (2), and the front portion (11) having dimensions such that the flange (33) of the faceplate (2) extends from the interior surface (1400) to a position laterally beyond the front of the mouth (3);
5 and

a means for accommodating a releasable fastener for attaching said box (1) to said faceplate (2).

8. The Electrical Box with Recessed Faceplate as recited in claim 7, wherein:

10 the means for accommodating a releasable fastener in the rear wall (26) of said faceplate (2) is one or more apertures (1003) in the rear wall (26) of said faceplate (2) when the releasable fastener is a screw (10); and

the means for accommodating a releasable fastener for attaching said box (1) to said faceplate (2) is a covered interior end (1001) having a threaded aperture (1002) for the channel (9) on the top (5) of the lateral surface (1500) of the box (1) and a covered interior end (1001) having a threaded aperture (1002) for the channel (9) on the bottom (6) of the lateral surface (1500) of the box (1) when the releasable fastener is a screw (10) that will pass through the one or more apertures (1003) in the rear wall (26) of said faceplate (2).
15

20 9. The Electrical Box with Recessed Faceplate as recited in claim 8, wherein:

said faceplate (2) and said box (1) each have a rectangular cross section.

10. The Electrical Box with Recessed Faceplate as recited in claim 9, further comprising:

25 a cover (39) having a front surface (141), a top (42) connected to the front surface (141), two sides (43) each of which is connected to the front surface (141), and longitudinal tabs (38) extending inward from each side (43); and

wherein said flange (33) has sides (35), each side (35) containing a channel (36) running along an edge (37) of said flange (33) to accommodate the longitudinal tabs (38) of said cover (39).
30

11. The Electrical Box with Recessed Faceplate as recited in claim 7, wherein:

said faceplate (2) and said box (1) each have a rectangular cross section.

12. The Electrical Box with Recessed Faceplate as recited in claim 11, further comprising:

5 a cover (39) having a front surface (141), a top (42) connected to the front surface (141), two sides (43) each of which is connected to the front surface (141), and longitudinal tabs (38) extending inward from each side (43); and

10 wherein said flange (33) has sides (35), each side (35) containing a channel (36) running along an edge (37) of said flange (33) to accommodate the longitudinal tabs (38) of said cover (39).

13. An Electrical Box with Recessed Faceplate, which comprises:

a faceplate (25) comprising:

an outer portion (24) comprising:

a flange (33);

15 an interior surface (1400) having sides (29), being attached to the flange (33), and projecting generally rearward from the flange (33); and

20 a longitudinal projection (201) extending inward from each side (29) of the interior surface (1400) and having a means for accommodating a releasable fastener; and

an inner portion (45) comprising:

25 a rear wall (26) with a perimeter (1401) and a cross-sectional shape, the rear wall (26) containing one or more instrumentality apertures (127) and having a means for accommodating a releasable fastener for attaching said faceplate (25) to an electrical instrumentality (15) as well as a means for accommodating a second releasable fastener; and

30 an interior surface (1400) projecting generally forward from the rear wall (26) and connected to the rear wall (26), with the dimensions of the interior surface (1400) of the inner portion (45) being such that the interior surface (1400) of the inner portion (45) will fit into and slide along the interior surface

(1400) of the outer portion (24) with substantially no gaps between such interior surfaces (1400); and

a box (1) comprising:

a rear wall (4) having a perimeter (1501);

5 a lateral surface (1500) attached to and projecting generally forward from the perimeter (1501) of the rear wall (4) and having a top (5) containing a channel (9), a bottom (6) containing a channel (9), and sides (7) each containing a channel (9), with each channel (9) having an interior end (1001);

10 a connecting wall (1503) having a first end (1502) attached to the lateral surface (1500), the connecting wall (1503) having sides (1505) and a second end (1504) and said connecting wall (1503) extending generally outward from the lateral surface (1500); and

15 a front portion (11) having a first end (1506) attached to and projecting generally forward from the sides (1505) and the second end (1504) of the connecting wall (1503), the front portion (11) containing the interior ends (1001) of the channels (9), the front portion (11) having a second end (1507) forming an open mouth (3), the front portion (11) having substantially the same cross-sectional shape as does the rear wall (26) of said faceplate (25), and the front portion (11) having dimensions such that the flange (33) of said faceplate (25) extends from the interior surface (1400) to a position laterally beyond the front of the mouth (3);

20 a means for accommodating a releasable fastener for attaching said box (1) to an electrical instrumentality (15); and

25 a means for accommodating a releasable fastener for drawing toward said box (1) and releasably retaining the outer portion (24) of said faceplate (25).

14. The Electrical Box with Recessed Faceplate as recited in claim 13, wherein:

30 the means for accommodating a releasable fastener in the longitudinal projection (201) is an aperture (44) when the releasable fastener accommodated thereby is a screw (10);

the means for accommodating a releasable fastener for attaching said faceplate (25) to an electrical instrumentality (15) is one or more apertures (1003) in said faceplate (25) as well as one or more apertures (19, 20) in the connecting wall (1503) when the fastener for attaching said faceplate (25) to an electrical instrumentality (15) is a screw (10);

the means for accommodating a releasable fastener for attaching said box (1) to an electrical instrumentality (15) is a covered interior end (1001) having a threaded aperture (1002) for the channel (9) on the top (5) of the lateral surface (1500) of the box (1) and a covered interior end (1001) having a threaded aperture (1002) for the channel (9) on the bottom (6) of the lateral surface (1500) of the box (1);

the means for accommodating a releasable fastener for drawing toward said box (1) and releasably retaining the outer portion (24) of said faceplate (25) is a covered interior end (1001) having a threaded aperture (1002) for the channels (9) on the sides (7) of the lateral surface (1500) of the box (1) so that said threaded aperture (1002) can receive screws (10) which pass through the apertures (44) in the longitudinal projections (201); and

the means for accommodating a second releasable fastener in the rear wall (26) of said faceplate (25) is an aperture (46).

15. The Electrical Box with Recessed Faceplate as recited in claim 14, wherein:

said faceplate (25) and said box (1) each have a rectangular cross section.

16. The Electrical Box with Recessed Faceplate as recited in claim 15, further comprising:

a cover (39) having a front surface (141), a top (42) connected to the front surface (141), two sides (43) each of which is connected to the front surface (141), and longitudinal tabs (38) extending inward from each side (43); and

wherein said flange (33) has sides (35), each side (35) containing a channel (36) running, along an edge (37) of said flange (33) to accommodate the longitudinal tabs (38) of said cover (39).

17. The Electrical Box with Recessed Faceplate as recited in claim 13,
wherein:

said faceplate (25) and said box (1) each have a rectangular cross
section.

5 18. The Electrical Box with Recessed Faceplate as recited in claim 17,
further comprising:

a cover (39) having a front surface (141), a top (42) connected to the
front surface (141), two sides (43) each of which is connected to the front
surface (141), and longitudinal tabs (38) extending inward from each side (43);
10 and

wherein said flange (33) has sides (35), each side (35) containing a
channel (36) running along an edge (37) of said flange (33) to accommodate the
longitudinal tabs (38) of said cover (39).

15 19. An Electrical Box with Recessed Faceplate, which comprises:
a faceplate (25) comprising:

an outer portion (24) comprising:

a flange (33);

20 an interior surface (1400) having sides (29), being
attached to the flange (33), and projecting generally rearward
from the flange (33); and

a longitudinal projection (201) extending inward from
each side (29) of the interior surface (1400) and having a means
for accommodating a releasable fastener; and

an inner portion (45) comprising:

25 a rear wall (26) with a perimeter (1401) and a
cross-sectional shape, the rear wall (26) containing one or more
instrumentality apertures (127) and having a means for
accommodating a fastener for attaching said faceplate (25) to an
electrical instrumentality (15) as well as a means for
30 accommodating a releasable fastener; and

an interior surface (1400) projecting generally forward
from the rear wall (26) and connected to the rear wall (26), with
the dimensions of the interior surface (1400) of the inner portion

(45) being such that the interior surface (1400) of the inner portion (45) will fit into and slide along the interior surface (1400) of the outer portion (24) with substantially no gaps between such interior surfaces (1400); and

5 a box (1) comprising:

a rear wall (4) having a perimeter (1501);

a lateral surface (1500) attached to and projecting generally forward from the perimeter (1501) of the rear wall (4) and having a top (5) containing a channel (9), a bottom (6) containing a channel (9), and
10 sides (7) each containing a channel (9), with each channel (9) having an interior end (1001);

a connecting wall (1503) having a first end (1502) attached to the lateral surface (1500), the connecting wall (1503) having sides (1505) and a second end (1504) and said connecting wall (1503) extending
15 generally outward from the lateral surface (1500); and

a front portion (11) having a first end (1506) attached to and projecting generally forward from the sides (1505) and the second end (1504) of the connecting wall (1503), the front portion (11) containing the interior ends (1001) of the channels (9), the front portion (11) having
20 a second end (1507) forming an open mouth (3), the front portion (11) having substantially the same cross-sectional shape as does the rear wall (26) of said faceplate (25), and the front portion (11) having dimensions such that the flange (33) of the faceplate (25) extends from the interior surface (1400) to a position laterally beyond the front of the mouth (3);
25 and

a means for accommodating a releasable fastener for drawing toward said box (1) and releasably retaining the outer portion (24) of said faceplate (25).

20. The Electrical Box with Recessed Faceplate as recited in claim 19,
30 wherein:

the means for accommodating a releasable fastener in the longitudinal projection (201) is an aperture (44) when the releasable fastener accommodated thereby is a screw (10);

the means for accommodating a releasable fastener in the rear wall (26) of said faceplate (25) is one or more apertures (46) in the rear wall (26) of said faceplate (25) when the releasable fastener is a screw (10); and

5 the means for accommodating a releasable fastener for drawing toward said box (1) and releasably retaining the outer portion (24) of said faceplate (25) is a covered interior end (1001) having a threaded aperture (1002) for the channels (9) on the sides (7) of the lateral surface (1500) of the box (1) so that said threaded aperture (1002) can receive screws (10) which pass through the apertures (44) in the longitudinal projections (201).

10 21. The Electrical Box with Recessed Faceplate as recited in claim 20, wherein:

said faceplate (25) and said box (1) each have a rectangular cross section.

22. The Electrical Box with Recessed Faceplate as recited in claim 21,
15 further comprising:

a cover (39) having a front surface (141), a top (42) connected to the front surface (141), two sides (43) each of which is connected to the front surface (141), and longitudinal tabs (38) extending inward from each side (43); and

20 wherein said flange (33) has sides (35), each side (35) containing a channel (36) running, along an edge (37) of said flange (33) to accommodate the longitudinal tabs (38) of said cover (39).

23. The Electrical Box with Recessed Faceplate as recited in claim 19, wherein:

25 said faceplate (25) and said box (1) each have a rectangular cross section.

24. The Electrical Box with Recessed Faceplate as recited in claim 23, further comprising:

30 a cover (39) having a front surface (141), a top (42) connected to the front surface (141), two sides (43) each of which is connected to the front surface (141), and longitudinal tabs (38) extending inward from each side (43); and

wherein said flange (33) has sides (35), each side (35) containing a channel (36) running along an edge (37) of said flange (33) to accommodate the longitudinal tabs (38) of said cover (39).

25. An extender for a traditional electrical box, which comprises:

5 a first side (48) having a front (1022), a back (52), a top (55), and a bottom (54) with the top (55) and bottom (54) beyond the position of the top (5) and bottom (6) of a traditional electrical box (46), said first side (48) containing an aperture (301) that will be above a height equal to the top (5) and an aperture (302) that will be below the level of the bottom (6) of a traditional electrical box (46), with such apertures (301, 302) also being at a position that will be in
10 general alignment with projections (134) on the top (5) and bottom (6) of a traditional electrical box (46);

a second side (49) having two channels (51) to accommodate projections (50) on a traditional electrical box (46) and also having a front (1022), a back
15 (52), a top (55), and a bottom (54) with the top (55) and bottom (54) beyond the position of the top (5) and bottom (6) of a traditional electrical box (46), said second side (49) containing an aperture (301) that will be above a height equal to the top (5) and an aperture (302) that will be below the level of the bottom (6) of a traditional electrical box (46), with such apertures (301, 302) also being at a
20 position that will be in general alignment with projections (134) on the top (5) and bottom (6) of a traditional electrical box (46);

a wall (53) attached, at a distance from the back (52) of the sides (48, 49) of the extender (47) greater than the distance between the open front (3) of a traditional electrical box (46) and the projections (134) for holding nails on the
25 top (5) of a traditional electrical box (46), to said first side (48) and said second side (49) running from the bottom (54) to the top (55) of said first side (48) and said second side (49), containing one or more instrumentality apertures (154), having a lower aperture (55) and an upper aperture (56) that, when the extender (47) has been placed upon a traditional electrical box (46), will generally be
30 aligned with an upper and a lower channel (9) of a traditional electrical box (46), said wall (53) also having a top (1021) and a bottom (1031);

an upper segment (1020) running along and attached to the top (1021) of said wall (53) between said first side (48) and said second side (49) of the

extender (47) from said wall (53) to the front (1022) of said first side (48) and said second side (49), said upper segment (1020) also being attached to the top (55) of said first side (48) and said second side (49); and

5 a lower segment (1030) running along and attached to the bottom (1031) of said wall (53) between said first side (48) and said second side (49) of the extender (47) from said wall (53) to the front (1022) of said first side (48) and said second side (49), said lower segment (1030) also being attached to the bottom (54) of said first side (48) and said second side (49).

26. The extender for a traditional electrical box as recited in claim 25,
10 further comprising:

one or more apertures (57, 59) in said wall (53) for accommodating one or more screws (10) for attaching a faceplate (2) to an electrical instrumentality (15).

27. The extender for a traditional electrical box as recited in claim 26,
15 further comprising:

a faceplate (2) comprising:

20 a rear wall (26) with a perimeter (1401) and a cross-sectional shape, the rear wall (26) containing one or more instrumentality apertures (127) and having a means for accommodating a releasable fastener for attaching said faceplate to (2) an electrical instrumentality (15);

a flange (33); and

an interior surface (1400) projecting generally forward from the rear wall (26) and connecting the rear wall (26) to the flange (33).

25 28. An Electrical Box with Recessed Faceplate, which comprises:

two generally L-shaped sides (601), each having a first end (603), a second end (608), a bottom (605), a vertex (609), and a shorter leg (617) with an inside edge (616);

30 a back panel (602) running the length of and attached to the first end (603) of each of said L-shaped sides (601), said back panel (602) having a bottom (606);

a bottom panel (604) attached to and running between the bottoms (605) of said L-shaped sides (601) and also attached to the bottom (606) of the back panel (602);

5 a front panel (607), having a top (613) and attached to the second end (608) of each of said L-shaped sides (601) running between said L-shaped sides (601) from the bottoms (605) of said L-shaped sides (601) to the vertex (609) of the L and also attached to said bottom panel (604);

10 a U-shaped ledge (610) having two legs (615), having an inside (611) of a bottom (612) of said U-shaped ledge (610) attached to the top (613) of said front panel (607), having an outside (614) of the legs (615) of said U-shaped ledge (610) attached to the generally L-shaped sides (601) in substantial alignment with an inside edge (616) of the shorter leg (617) of each L, having a threaded aperture (620) in each leg (615) of said U-shaped ledge (610), and having a secondary threaded aperture (629) in at least one leg (615) of said U-shaped ledge (610);

15 an insert (622) slidably mounted above said U-shaped ledge (610), said insert (622) having a top (623), bottom (624) having ends (628), two sides (625), and outer edges (631), with an aperture (626) in the bottom (624) of said insert (622) to accommodate a switch (619) and an aperture (627) in one or more ends (628) of the bottom (624) of said insert (622) designed to be substantially aligned with one or more of the secondary threaded apertures (629) in one or more legs (615) of said U-shaped ledge (610) after said insert (622) has been slidably mounted above said U-shaped ledge (610); and

20 a flange (630) extending from the outer edges (631) of said insert (622) generally perpendicular to the top (623), bottom (624), and two sides (625) of said insert (622).

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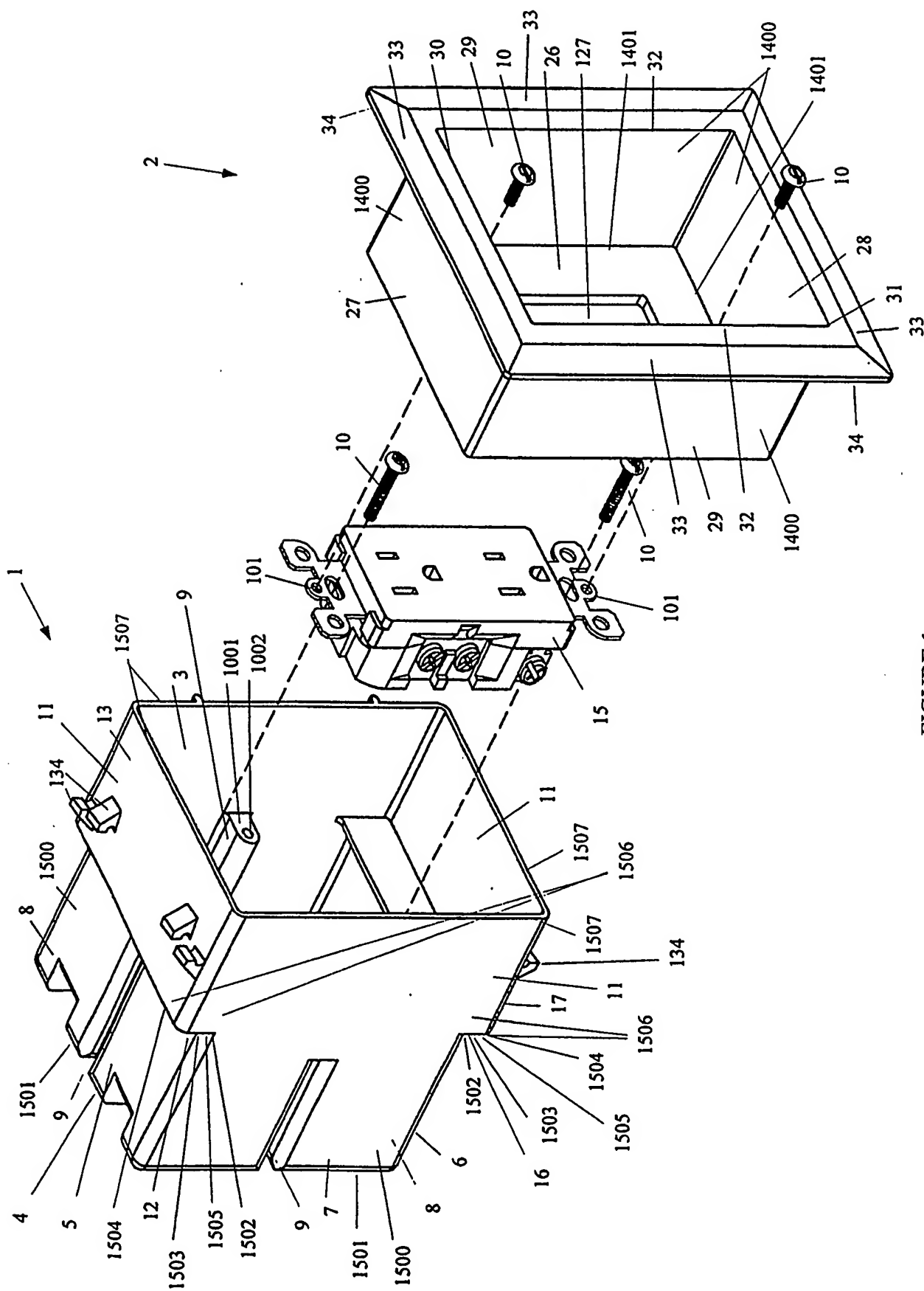


FIGURE 1

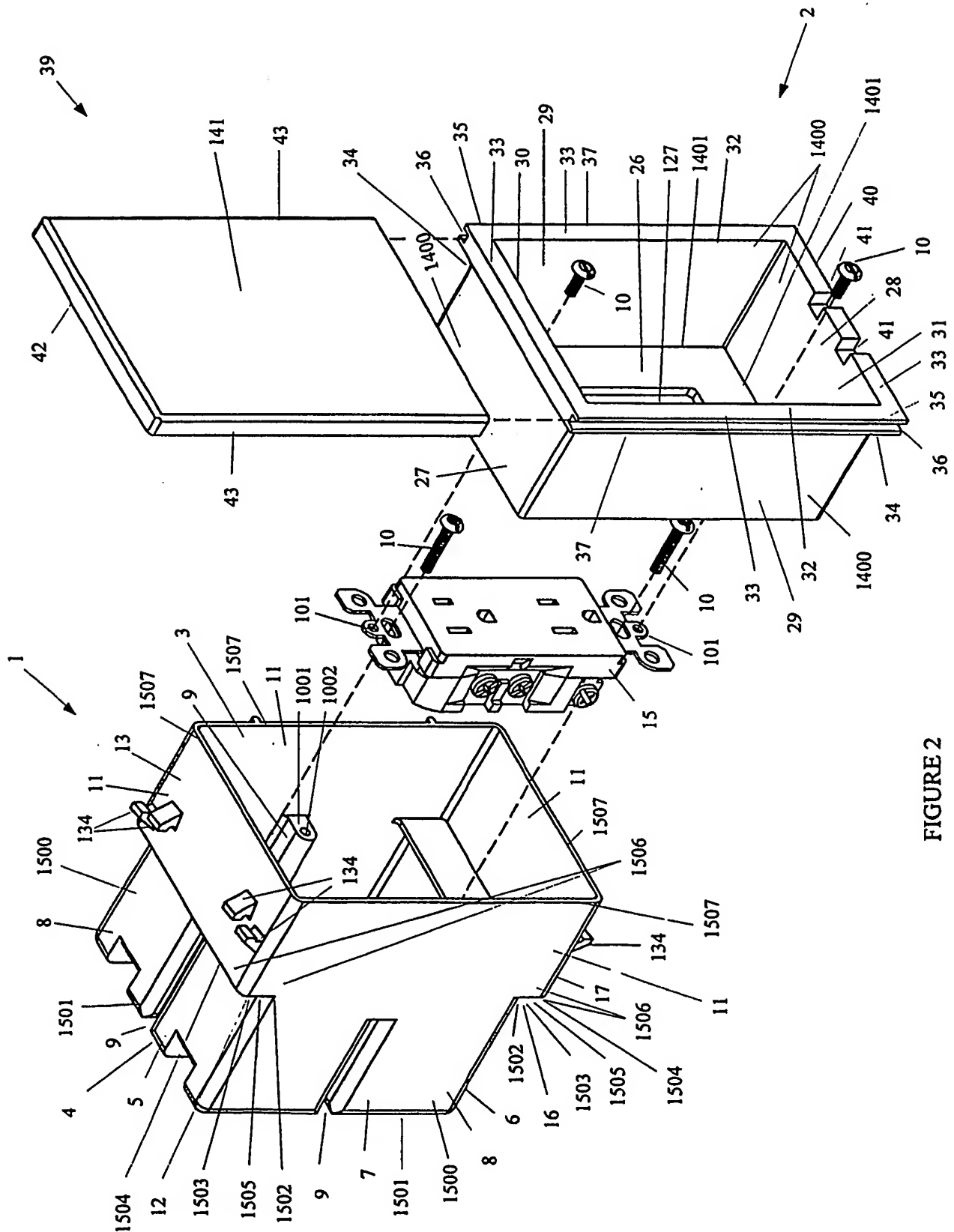


FIGURE 2

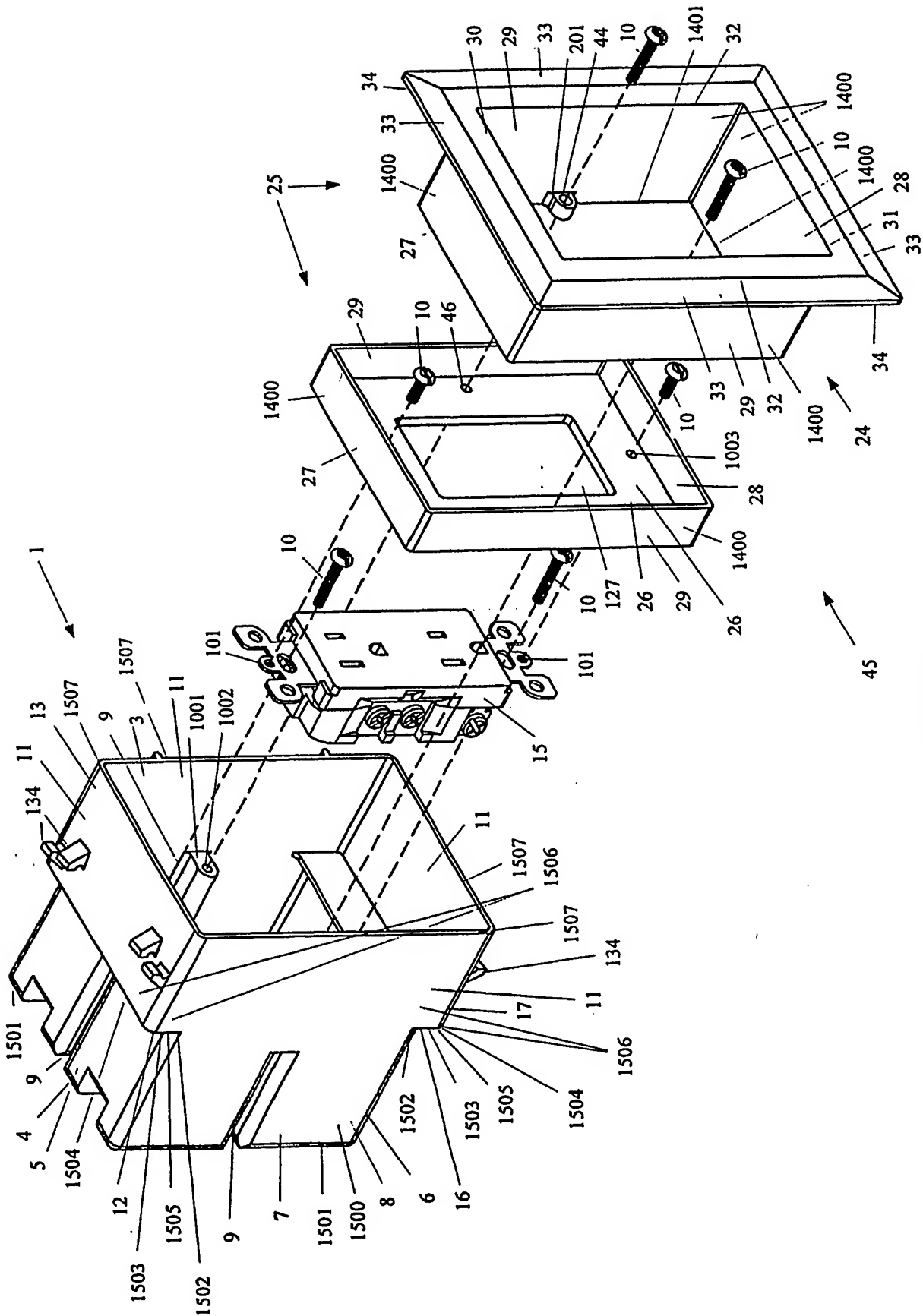


FIGURE 3

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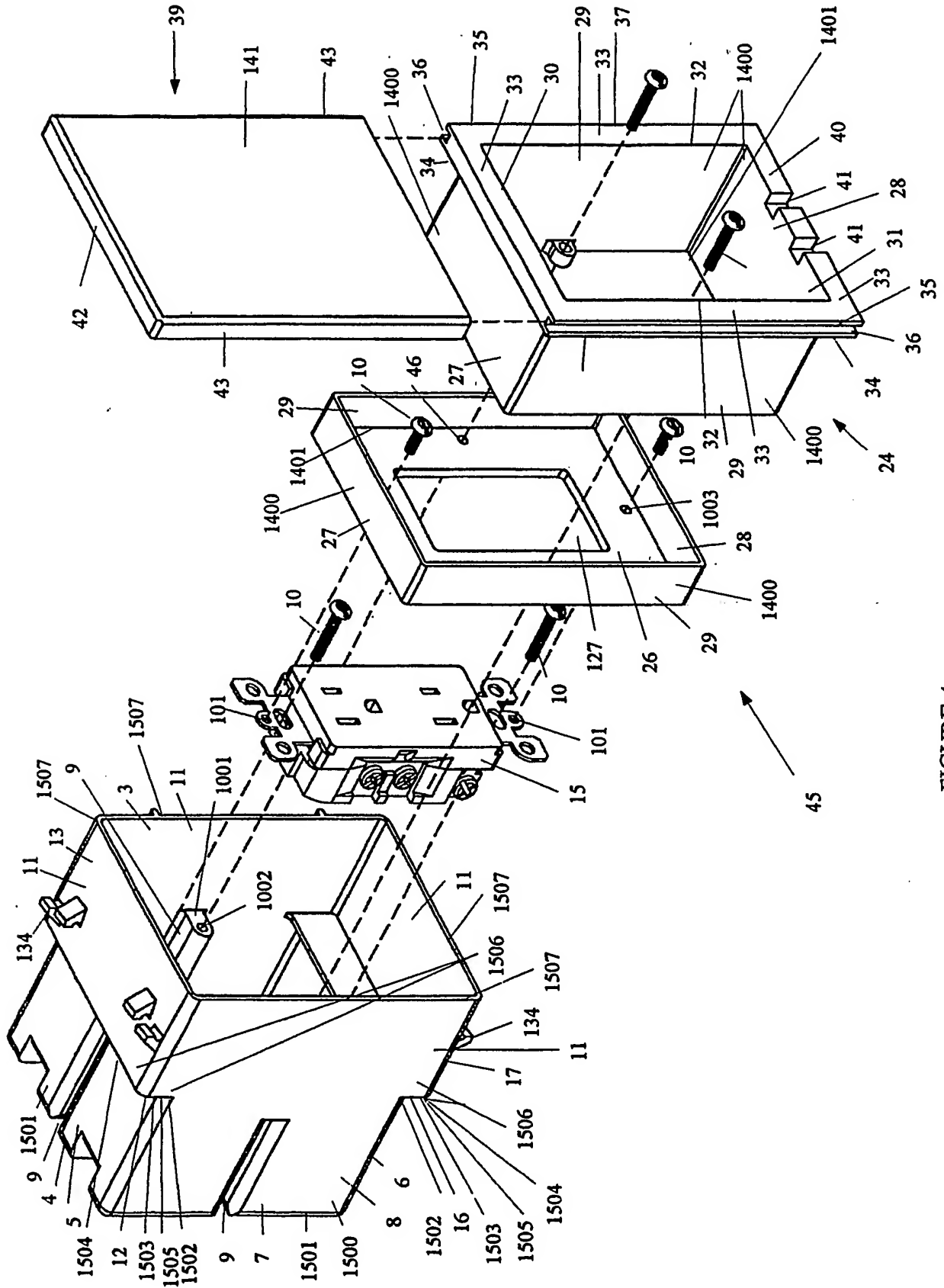


FIGURE 4

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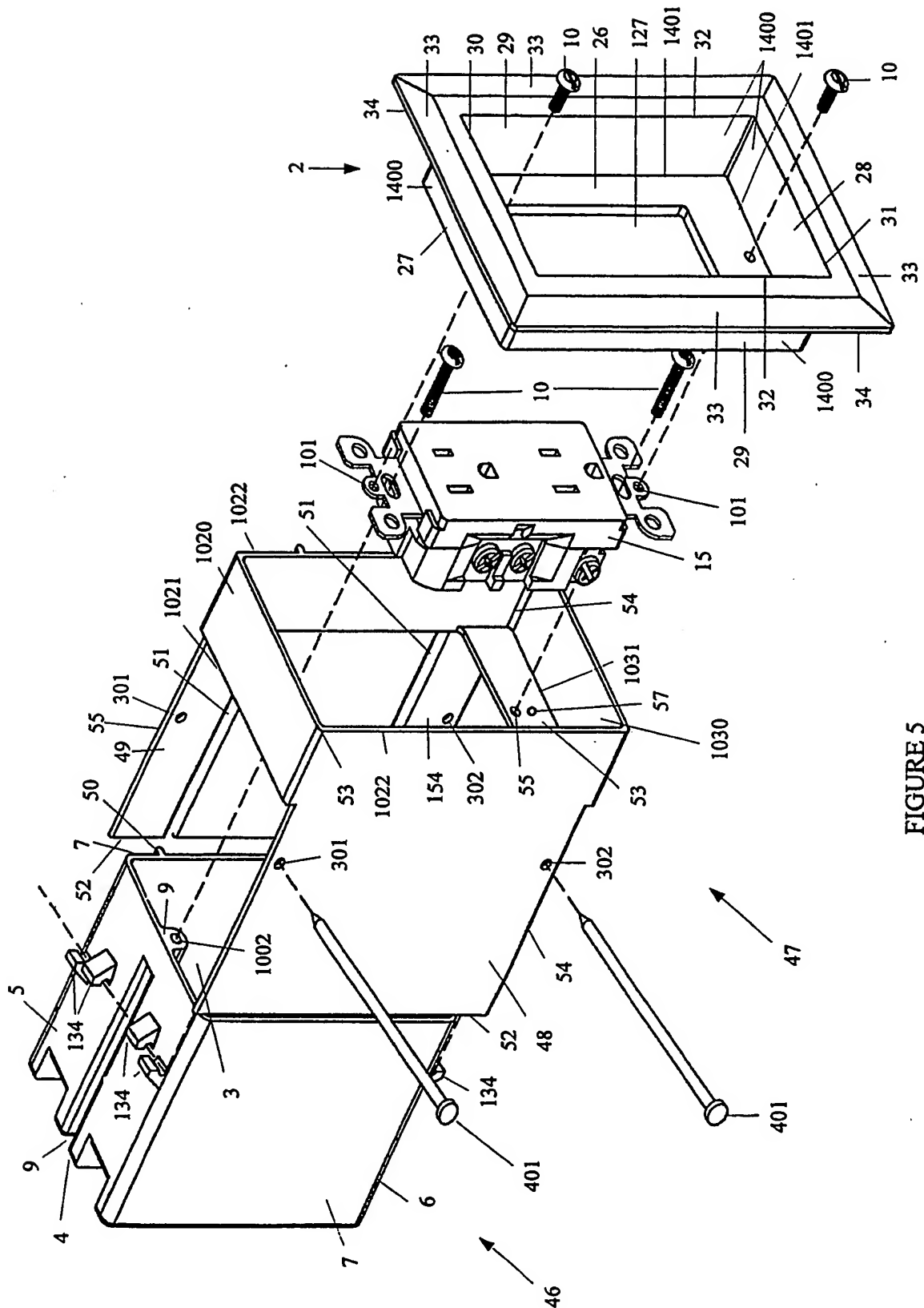


FIGURE 5

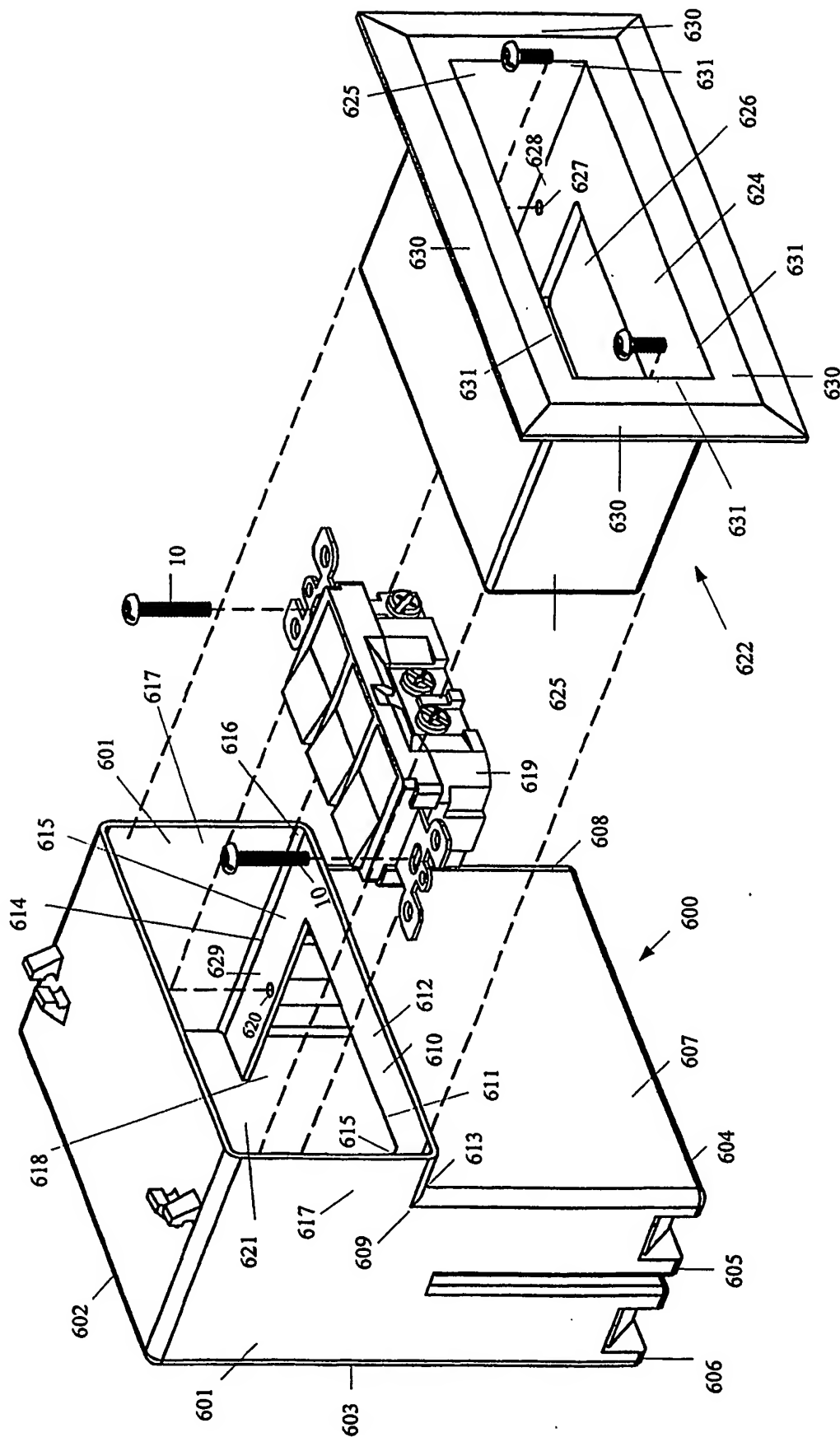


FIGURE 6

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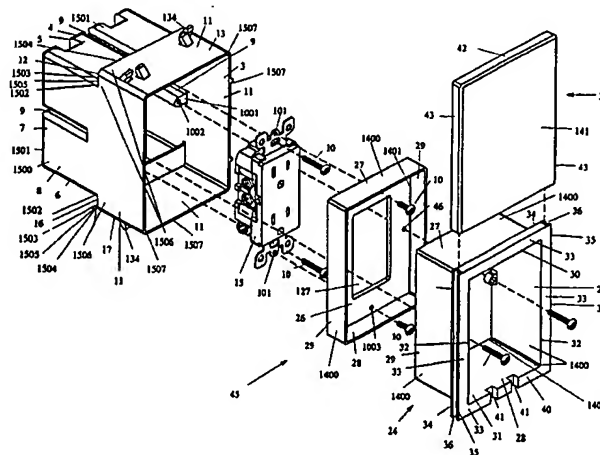
Published:

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[Continued on next page]

(54) Title: ELECTRICAL BOX WITH RECESSED FACEPLATE



(57) Abstract: An electrical box with recessed faceplate having a one-piece recessed faceplate (2) and adapted to accommodate a two-piece recessed faceplate (25). A rear portion (8) contains channels (9) on the top (5), bottom (6), and sides (7). A connecting wall (1503) attaches the rear portion (8) to the front portion (11). The connecting wall (1503) extends beyond the rear portion (8) and preferably contains one or more apertures (19, 20) to accommodate releasable fasteners such as screws (10). These apertures (19, 20) and the channels (9) assure that no screws (10) or analogous components or another type or releasable fastener are exposed within the box (1). The two-piece recessed faceplate (25) has an inner portion (45) and an outer portion (24) which slide along each other in order to enable the box (1) to be mounted at different distances from the mounting surface. Optionally, a removable cover (39) extends across the mouth (3) of the faceplate (2, 25). An extender (47) is also available for converting traditional electrical boxes (46) into a box that can accommodate a recessed faceplate (2, 25). And an alternative electrical box (600) holds switches (619) and is L-shaped.



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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

International Application No

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 H01R13/73 H01R13/447 H02G3/12 H02G3/14

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H01R H02G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

WPI Data, PAJ, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 988 832 A (M.J.SHOTEY) 29 January 1991 (1991-01-29) cited in the application: column 3, line 14 -column 4, line 24 column 5, line 35 -column 6, line 68; figures 1,2,6-9	1-12
A	US 4 059 327 A (D.S.VANN) 22 November 1977 (1977-11-22) cited in the application column 2, line 60 -column 3, line 37; figures 1-3	13-24
A	US 4 918 259 A (W.L.HANSON) 17 April 1990 (1990-04-17) cited in the application the whole document	25-27

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INTERNATIONAL SEARCH REPORT

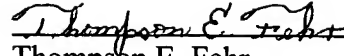
Information on patent family members

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Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4988832	A	29-01-1991	US 4803307 A	07-02-1989
			AU 3053589 A	28-05-1990
			CA 1329253 C	03-05-1994
			EP 0442871 A1	28-08-1991
			WO 9005393 A1	17-05-1990
			US 5171939 A	15-12-1992
			US 4874906 A	17-10-1989
US 4059327	A	22-11-1977	NONE	
US 4918259	A	17-04-1990	NONE	

DATED this 25th day of August, 2004.

A handwritten signature in cursive script, reading "Thompson E. Fehr", is written over a horizontal line.

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